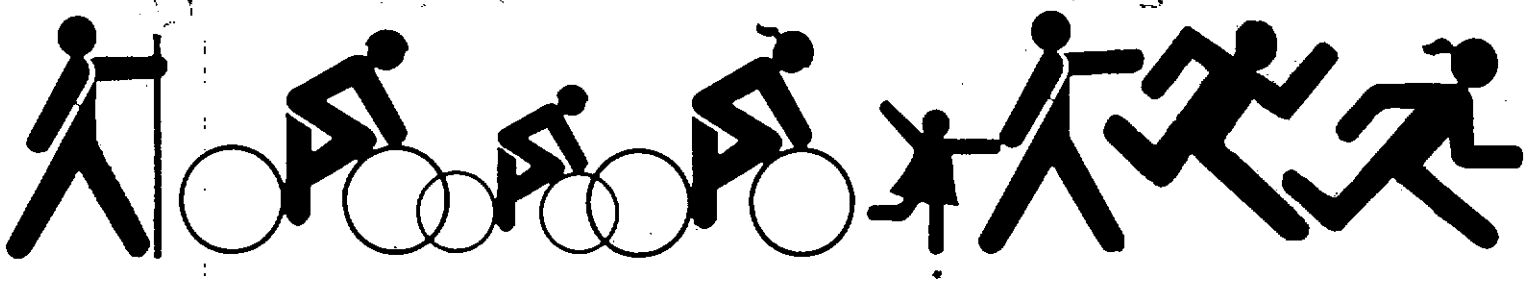
Frederick County
Bikeways and Trails Plan



Adopted December 1999

Prepared By
Frederick County Department of Planning and Zoning

Frederick County Planning Commission

Winchester Hall, 12 East Church Street, Frederick, MD 21701

Resolution No.

A Resolution to Approve & Recommend Adoption of the
Frederick County Bikeways and Trails Plan

WHEREAS, citizen comments were received at a public worksession on the Preliminary Draft Bikeways and Trails Plan in November of 1998; and

WHEREAS, after working with a citizens advisory committee a Draft Bikeways and Trails Plan was prepared. The purpose of the Plan is to identify a network of on-street bikeways and off-street trail corridors, provide design standards, and identify implementation strategies; and

WHEREAS, following notice of the time and place in a newspaper of general circulation in the County, the Planning Commission held public information meeting on June 2, 1999 followed by a public hearing on June 16, 1999 on said Draft Bikeways and Trails Plan; and

WHEREAS, prior to the public hearing the Planning Commission did refer a copy of said Draft Bikeways and Trails Plan to all adjoining jurisdictions, and to all State and other local agencies that have responsibility for financing or constructing public improvements necessary to implement the Plan, and the comments received by these agencies were included in the hearing record and considered by the Planning Commission in their review; and

WHEREAS, in July 1999, the Planning Commission held a public worksession to review public hearing testimony and written correspondence on the said Draft Bikeways and Trails Plan and to discuss changes and make adjustments to the Draft Plan text and maps; and

NOW, THEREFORE, BE IT RESOLVED by the Planning Commission of Frederick County, Maryland, that the "Recommended Frederick County Bikeways and Trails Plan" text and Plan Map are hereby approved and recommended for adoption by the Frederick County Board of Commissioners.

The undersigned hereby certifies that the foregoing Resolution was unanimously approved and recommended for adoption this 18th day of August 1999.

Frederick County Planning Commission

Attest: Joan McIntyre, Secretary

By: Richard Stup, Chairperson

RESOLUTION NO. 99-31

Resolution of The Board of County Commissioners of Frederick County, Maryland

Re: ADOPTION OF THE FREDERICK COUNTY BIKEWAYS AND TRAILS PLAN

WHEREAS, by Resolution 99-31, the Frederick County Planning Commission approved and recommended a Bikeways and Trails Plan to be adopted by the Board of County Commissioners, the local legislative body, and

WHEREAS, the Board of County Commissioners conducted a public hearing on the Bikeways and Trails Plan, recommended by the Frederick County Planning Commission, on the 2nd day of November 1999, pursuant to public notice duly given, and

WHEREAS, subsequent to the public hearings, the Board of County Commissioners considered all the recommendations of the Frederick County Planning Commission, the Planning Staff, those comments received as part of the public hearing of the Planning Commission and before the Board of County Commissioners, and also reviewed comments made by adjoining jurisdictions, State and Local agencies and interested persons, and the Board of County Commissioners conducted this review process in sessions open to the public, and

WHEREAS, as a result of the various public hearings, comments and communications received on this matter, the Board of County Commissioners made certain limited changes in the Planning Commission's Recommended Bikeways and Trails Plan, and

WHEREAS, the County Commissioners find that this Plan has the general purpose of guiding and accomplishing the coordinated and harmonious development of Frederick County, and, will, in accordance with present and future needs, promote the health, safety, morals, order, convenience, prosperity, and general welfare of the County and its citizens.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF FREDERICK COUNTY, MARYLAND, that the Frederick County Bikeways and Trails Plan containing the text, and map is hereby adopted.

The undersigned hereby certifies that this Resolution was approved and adopted on the 16th day of December, 1999.

ATTEST:

Ronald A. Hart
County Manager

BOARD OF COUNTY COMMISSIONERS
OF FREDERICK COUNTY, MARYLAND

By: David P. Gray (SEAL)
David P. Gray
President

pc: BOCC, Co. Atty., P&Z, File

Frederick County

Bikeways and Trails Plan

As adopted by the Board of County Commissioners of Frederick County, Maryland

December 16, 1999

Prepared by

Frederick County Department of Planning and Zoning
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Acknowledgments

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Pam Brewer
Jackie Ebersole, Frederick County Council of Governments
John Fieseler, Tourism Council
Steve Fox, Frederick County Parks and Recreation Commission
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Bill Smith, Frederick County Trails Inc.
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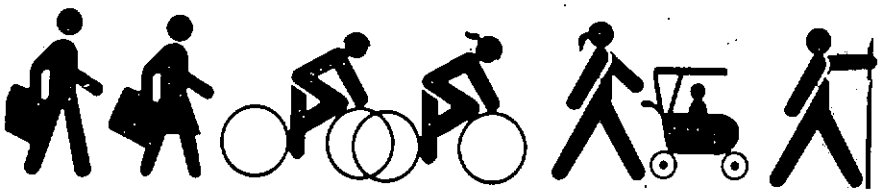
Introduction



This is Frederick County's first effort in identifying a countywide network of bikeways and trails. Though Frederick County has been a popular location for recreational cyclists from around the State there has never been a formal effort to promote cycling in the County and to develop facilities to accommodate cyclists.

The Washington metropolitan region has a well established planning process and network of trails and bikeways. This plan will give Frederick the opportunity to integrate a countywide network with regional and statewide facilities before opportunities are lost. The biggest boost in planning and developing bikeway and trail facilities has been received from the increased federal funding available through ISTEA in 1991 and the reauthorized federal legislation TEA 21 passed in 1998.

In 1995 the State of Maryland adopted legislation referred to as Bicycle and Pedestrian Access 2000. This bill seeks to achieve a significant increase in the percentage of total trips performed by walking or bicycling. At the local level Access 2000 requires comprehensive plans to address access for bicycles and pedestrians. It also calls for off-street parking regulations to include requirements for bicycle parking.

PURPOSE OF THE PLAN

This plan will have three primary components: identification of corridors; development of design standards; and the development of implementation strategies.

Identification of Corridors

This plan will identify both on-street bikeways and off-street trail corridors. With a countywide focus and limited resources the identification of the off-street trail corridors in particular will be rather generalized. It is important to bear in mind that this plan will not provide any kind of design or engineering information on particular bike routes or trail corridors. The plan recognizes that there will need to be follow- up studies that would address design, engineering feasibility, and operational issues. Identification of a corridor in this plan does not guarantee that it will be developed if further studies find problems or issues that may result in the corridor being dropped from consideration.

Develop Design Standards

The County does not currently have design standards addressing bike lanes and other on-street bikeway designs. Designs for off-street trails will also be developed. These standards would help to provide consistent application for trails that may cross between the County and other municipalities.

Develop Implementation Strategies

This plan identifies strategies related to planning, facilities, and education/promotion. It is expected that further study will be necessary especially for the off-street trail corridors.

PLAN PROCESS

The County has organized a Citizens Advisory Committee (CAC) to work with the staff in developing the plan. The CAC has representatives from several user groups such as hiking, bicycling, and equestrian clubs and other organizations. The organizations represented on the CAC are listed below:

- Frederick Pedalers Bicycle Club
- Trail Riders of Today
- Potomac Appalachian Trail Club
- Frederick County Trails Inc.
- Frederick County Civic Federation
- Tourism Council of Frederick County
- Farm Bureau
- Frederick County Council of Governments
- Monocacy Scenic Rivers Board
- Frederick County Parks and Recreation Commission
- Frederick City Parks Commission
- Frederick County Builders Association

A Technical Advisory Committee (TAC) composed of staff from the County, Frederick City, and other municipalities was used to provide technical comments on the preparation of the Draft Plan.

Following the preparation of the preliminary draft bikeway and trail alignments a public workshop was held in November 1998. This workshop provided an opportunity to receive public comments prior to the preparation of the draft plan. Approximately 50 people attended the workshop.

The Draft Plan was presented to the County Planning Commission at a public hearing in June 1999. The Planning Commission took action on the Plan in August 1999 with their recommendation forwarded to the Board of County Commissioners for review and adoption.

DEFINITIONS

In order to assist the reader with this plan the following definitions of terminology used throughout the plan are provided.

Advanced Cyclist - Experienced rider who can operate under most traffic/road and trail conditions.

Basic Cyclist - Casual and/or novice cyclist that include less experienced adults and children who are not comfortable riding in traffic.

Bicycle Lane (Class II) - A portion of a roadway which has been designated by striping, signing, and pavement markings for the preferential or exclusive use of bicycles.

Bicycle Path (Class I) - A bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right of way or within an independent right of way.

Bicycle Route (Class III) - A roadway designated only by signs that does not have a striped or marked space for a bicycle. This may include the shared use of the roadway itself or a shoulder.

Bikeway - Any road, path, trail or way which in some manner is specifically designated as being open to bicycle travel.

Breakdown and Recovery Lane - See Shoulder. A paved shoulder primarily for the use of motor vehicles.

Easement - An agreement which may allow for use and access to private property by the public.

Hybrid Bicycle Lane - See Bicycle Lane. A hybrid would include the placement of a bicycle symbol on the pavement though without striping to separate the extra width from the travel lane.

Multi-Use Trail - An off -street facility that may accommodate the following users: walkers, joggers, bicyclists, equestrians, in- line skaters, and skiers. Motorized vehicles would be prohibited from using multi-use trails. These trails would have an improved surface of concrete, asphalt, crushed stone, compacted dirt, or grass.

Natural Surface Trail - An off-street facility that could accommodate walkers/hikers, mountain bikers, or equestrians. These trails would typically be paths without an improved surface.

Right- of- Way - A general term denoting land, property or interest therein, usually in a strip, acquired for or devoted to transportation purposes.

Shared Use Roadway - This is a travel lane that both the bicyclist and a motorist share. This could either be a wide curb lane or a roadway with no shoulder. Also referred to as a bicycle route.

Shoulder - This is the smooth paved surface adjacent to the roadway's travel lane.

Travel lane - That portion of a roadway that is for the primary use for motor vehicles. The typical width of travel lane is 10-12 ft. depending on the classification of the roadway.

Wide Curb Lane - This is a shared use facility where the outside travel lane is at least 14 feet wide. Typically the extra space is not signed or striped for the exclusive use for bicyclists. Motor vehicles may use the extra width in the absence of bicyclists.

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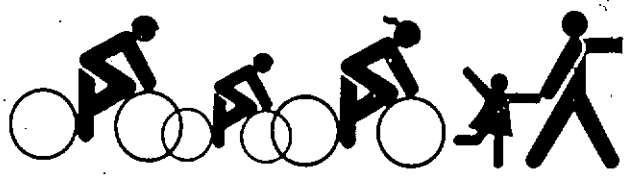
The Plan Concept



This chapter will discuss the general concepts and framework of the Plan. This is accomplished through the development of a vision statement and a series of goals by the CAC. Since the idea of developing a countywide network of on-street bikeways and off-street trails is new to Frederick County it is important to describe the many benefits and opportunities that bikeway and trail facilities offer to the community.

VISION

Frederick County will be a place where bicycling and walking are viable modes of travel for recreation and transportation purposes. A network of bikeways and multi-use trails will provide safe and convenient connections between the County's municipalities and would provide access to recreational, historical/cultural. commercial, and employment areas.

GOALS

1. Provide recreational bikeway or trail connections, that are accessible to all ages and abilities of users, to existing and planned park and recreation facilities, schools, cultural/historic sites, and natural features .

2. Provide transportation connections between residential and commercial, employment, and educational uses that is accessible to all ages and abilities of users.

3. Develop corridors/facilities that meet the needs of cyclists, walkers/hikers, equestrians, and other leisure activities .

4. Incorporate on -street or off- street bikeway facilities as part of new road construction, reconstruction projects, and maintenance projects.

5. Provide bikeway facilities that offer safe riding for basic cyclists.

6. The County shall accommodate pedestrian and bicycle access into the design of new development and existing communities impacted by development.

7. Develop bikeway and trail corridors that connect with existing and planned inter- county and inter- state facilities.

8. Provide pedestrian and bikeway access along with bicycle parking to major transportation/commuter facilities such as MARC stations, bus stations, and park and ride lots.

9. Provide bikeway and trail connections between the County's population centers (growth areas) for recreational and transportation purposes.

10. Develop local law enforcement programs coordinated with educational efforts to promote safe and courteous bicycle use on trails and roadways.

11. Evaluate the opportunity for bikeways and trails in existing and proposed utility lines, existing and abandoned railroad lines, and along waterways.

12. Encourage public/private partnerships and volunteerism for trail construction, maintenance and safety patrols.

13. The County in cooperation with the municipalities and private organizations should seek alternative sources of funding for bikeway and trail projects.

BENEFITS AND OPPORTUNITIES

There is considerable documentation regarding the benefits, both direct and indirect, from off-street trails. In many respects a network of on-street bikeways would also produce similar types of benefits.

Recreation

The recreational use of trails and bikeways is by far the most prevalent use. Reports have indicated that "60 million Americans are bicyclists, 17 million are horseback riders, 6 million are cross country skiers, and 100 million walk for pleasure" (Transportation Potential and Other Benefits of Off-Road Bicycle and Pedestrian Facilities, FHWA, 1992). The Bikeways and Trails Plan survey conducted as part of the Public Workshop indicated that 90% of the respondents bicycle for recreation. The most obvious benefit from recreation are the health and fitness aspects.

While off-street trails are themselves a valuable recreational facility they also serve to provide access to other local, state, and federal park facilities.

Off-street trail corridors offer several advantages over traditional park facilities. The linear nature of trails provides greater perimeter area which allows for more properties to abut the trail which allows for more access to the trail and can also create economic benefits which will be discussed later. Trails can traverse through varying terrain which provides the visitor with multiple experiences. The amount of land generally needed and the type of improvements needed result in lower acquisition and development costs.

Recreational trail facilities are becoming more and more popular across the country. A needs assessment conducted by the Frederick County Bureau of Parks and Recreation in May 1998. The survey involved a random sample of 1,500 Frederick County residents who were mailed the survey form. The effective response rate was 50%. The first question asked about the usage of recreation facilities during the past year. It should be noted that facilities may have been located outside of the County. Not counting picnic facilities, 47% of the respondents identified walking/jogging/bicycle paths as the type of facility receiving the most use. A follow-up question indicated that 40% of the respondents ranked walking/jogging/bicycle paths as either the most important, second most important, or third most important facility to them. Another question asked about facilities that are either inadequate or unavailable in the County. Walking/jogging/bicycle paths were identified as having the largest unmet demand as 26% of the

respondents felt that these facilities were either inadequate or unavailable. Detailed results from the survey on these questions are included in the Appendix.

Transportation

A complete network of on-street bikeways could provide for greater opportunities for cycling to work, school, or for shopping trips. A Nationwide Personal Transportation Survey conducted in 1990 indicated that 79% of all daily trips are 10 miles or less and almost 50% are three miles or less. These distances are well within the ability to use a bicycle. Linkages between residential, employment, and commercial areas can make cycling a viable alternative to the automobile for many trips. Integration with transit facilities such as MARC stations is also important.

Economic Development - Tourism

As a recreational resource trails are attractive to both residents of the area where the trail is located as well as to visitors who use the trail for day trips and for longer multi-day trips. The economic impact from trail users has been surveyed on trails across the country. The direct income from the purchase of food, lodging, equipment, gas, souvenirs, etc. ranges from approximately $5 per person per day up to $25 per person. Surveys have shown the annual contribution to the local economy from trails to range from $159,000 to $1,476,000. Many communities have experienced the establishment of new businesses to cater to the trail users including bike shops, restaurants, and bed and breakfast's.

With the development of a Heritage Areas program for the County there is the opportunity to further promote the County's historical and cultural sites with the establishment of a network of bikeways and trails. In some cases the trails themselves have historical value. The proposed H&F Trolley Trail from Thurmont to Frederick can be used to document and preserve features of the electric trolleys that operated in the County from the late 1800's to the 1950's.

The County has established a Rural Legacy area which includes the Middletown Valley from Myersville down to Brunswick. The Rural Legacy program will help to preserve the rural and agricultural character of this area. Preserving these areas can assist with the concept of bicycle tourism as these areas are very attractive for cyclists looking for scenic areas with minimal amounts of traffic to ride through. Many counties in the Maryland and elsewhere market their rural and agricultural landscapes as ideal places for cycling tours.

Property values have also been found to be positively affected by the proximity of a trail. A study of a trail in Seattle found that home values increased by 6.5% for homes located near but not adjacent to the trail. There was no significant effect on the value of homes immediately adjacent to the trail. It was also found that homes near the trail were easier to sell.

Environment

A goal of developing a network of bikeways and trails is to reduce automobile use for short trips which helps relieve traffic congestion and also reduces air pollution. There are opportunities to increase commuting trips by bicycle and to provide linkages with transit facilities such as the MARC stations. Since Frederick County is within the Washington metropolitan region non-attainment area for various air pollutants, anything that can be done to reduce automobile trips will help the region meet its air pollution reduction goals.

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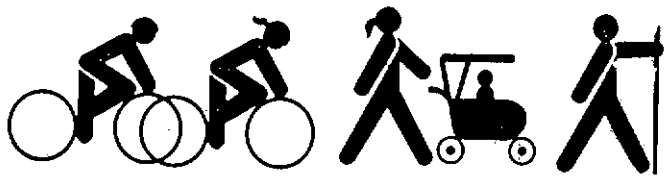
Design Standards



The general scope of this Plan will not allow for specification of particular designs for the on-street and off-street facilities. Further study will be necessary for each trail corridor and designated street to determine the most appropriate design. It is expected that the design standards described in this Plan will be adopted as part of the County's Street Design Manual. To ensure consistency on facilities that cross between the County and the municipalities it is recommended that the same standards be adopted by the individual municipalities.

TYPE OF CYCLISTS

The application of particular design standards for on-street bikeways needs to consider the type of cyclist that is most likely to use a particular route. This Plan recognizes two types of cyclists, Basic and Advanced, which are described below.

Basic Cyclist

It has been estimated that 95% of all cyclists are considered basic cyclists which include children and inexperienced adults. The definition used in this Plan follows.

> *Basic Cyclist - Casual and /or novice cyclist that include less experienced adults and children who are not comfortable riding in traffic.*

Basic cyclists prefer the following types of facilities.

- Comfortable access to destinations, preferably by direct route, using either low-speed, low traffic volume streets or designated bicycle facilities.
- Well-defined separation of bicycles and motor vehicles on arterial and collector streets (bike lanes or shoulders) or separate bike paths.
- Access to key destinations surrounding residential areas, including schools, recreation facilities, shopping, or other residential areas.
- Residential streets with low motor vehicle speed limits and volumes.

Basic cyclists could also use the local subdivision streets and for small children sidewalks can be used. Encouraging riding within neighborhoods makes it important to provide local street connections within and between neighborhoods. Since children are permitted to ride bicycles on sidewalks the construction of 5 foot wide sidewalks versus the standard 4 foot width is recommended to improve the comfort and safety for children as they gain experience and skills to eventually use the streets to get around.

Advanced Cyclist

Since the advanced cyclist has the experience and the confidence to use most any street to get where they need to go they do not have as great a need for separated facilities like bike lanes or off-street trails. These cyclists are best served by making all streets compatible for bicycle use.

> *Advanced Cyclist - Experienced riders who can operate under most traffic/road and trail conditions.*

The following should be undertaken to accommodate the advanced cyclist.

- Establish and enforce speed limits to minimize speed differentials between bicycles and motor vehicles on neighborhood streets and/or by implementing traffic calming strategies.
- Provide wide outside curb lanes on collector and arterial streets built with curb and gutter.
- Provide usable shoulders on highways built with a rural section.

ON-STREET BIKEWAY DESIGNS

The basis for the recommended standards in this Plan come from the American Association of Highway and Transportation Officials (AASHTO). The AASHTO Guide for the Development of Bicycle Facilities provides standards for the facility cross sections, signage, pavement markings, and how to handle turning movements at intersections.

the application of these designs can be accomplished in different ways. Bicycle facilities can be retro-fitted onto existing streets by re-striping the road. Travel lane widths can be reduced from 12 ft to 10-11 ft to provide more pavement to accommodate cyclists without having to widen the street. Other opportunities to include bicycle facilities along roads would occur in conjunction with widening and overlay projects where additional paving for shoulders could be provided. Projects for new roads or for the reconstruction of existing roads should also incorporate plans for bicycle facilities during the design phase.

Bicycle Lanes

Bicycle lanes would be recommended for those roads that have the higher traffic volumes and speeds where it is necessary to provide the cyclist with the maximum amount of separation fro the motor vehicle traffic. This is especially necessary if the route is expected to attract basic cyclists who require a well defined and safe facility.

Figure 1 shows a bicycle lane where there is not on-street parking. This standard can be used for both rural roads that do not have any curb and gutter and for urban streets that are likely to have curb and gutter. For the latter case the minimum 4 ft width for the bicycle lane should not include the concrete gutter pan. Figure 2 shows how the bicycle lane should be configured when there is on-street parking. In this case the minimum width should be 5 ft.

Figure 1 Bicycle Lane

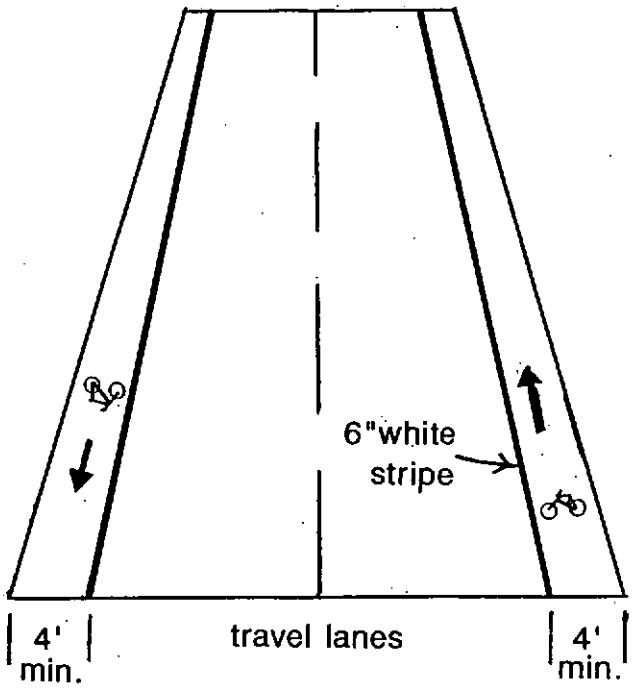
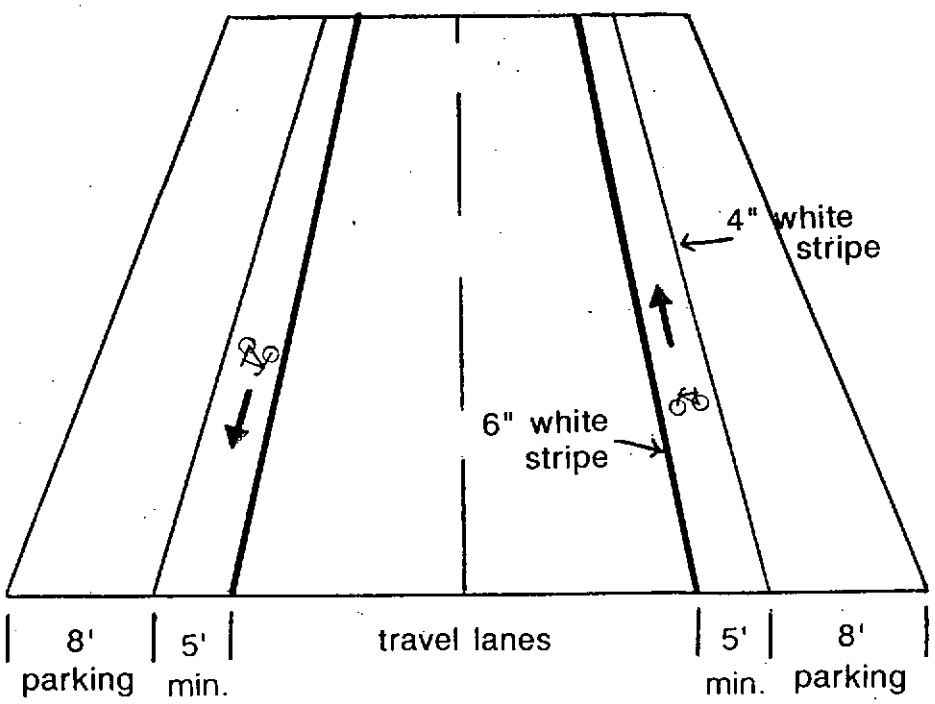


Figure 2 Bicycle Lane with On-Street Parking



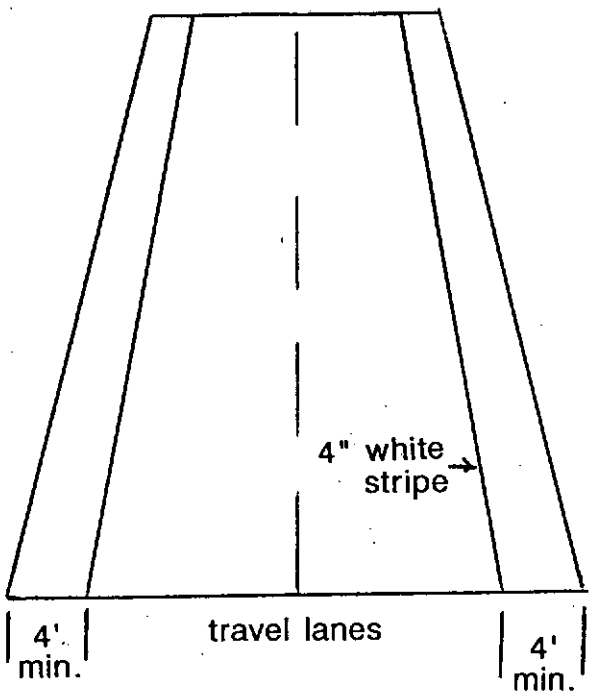
Paved Shoulders

This type of facility would be more prevalent in the rural areas where the roads would not have curb and gutter. In many cases the use of a paved shoulder would be no different than having a bike lane. The primary difference is how the facility is marked with stripes and pavement markings. Paved shoulders would only be marked with signage and not have any pavement markings. It is important that the shoulder be paved with the same material as the travel lanes as opposed to using a tar and chip surface which is considerably rougher.

Paved shoulders serve the needs of both basic and advanced cyclists though it may not be comfortable for basic cyclists to use shoulders along higher speed arterial highways.

This Plan recognizes that along many of the designated roads in the rural parts of the County there will be numerous physical constraints such as trees, utility poles, buildings, ditches, and embankments that would make it difficult, if not impossible, to provide a standard 4 ft shoulder. Rather than not having any shoulder a minimal shoulder of even 2 ft would provide enough space to accommodate most advanced cyclists.

Figure 3 Paved Shoulder



Wide Curb Lane

This type of facility can be used for all roads in an effort to make as many roads as possible bicycle compatible to serve advanced cyclists. The use of a wide curb lane which does not delineate an area for bicyclists is also referred to as a shared use facility where the motor vehicles and the cyclists share the same space on the road. The wide curb lane is designed to provide enough room within the travel lane so the motor vehicles do not have to swerve out of the lane to pass a cyclist. This type of improvement is generally not suitable for basic cyclists depending on the speeds and the amount of traffic on the road.

Along existing multi-lane roads, see Figure 5, this type of facility can be retrofitted by restriping the inside travel lanes to a width of 10-11 ft. to create a wider outside curb lane. It is not recommended to have a wide curb lane wider than 15 ft in order to keep motor vehicles from passing other vehicles in the lane.

A variation of the Wide Curb Lane would involve painting a bicycle symbol on the pavement along edge of road without any striping to separate the area from the travel lane. This is called a Hybrid Bicycle Lane.

Figure 4 Wide Curb Lane

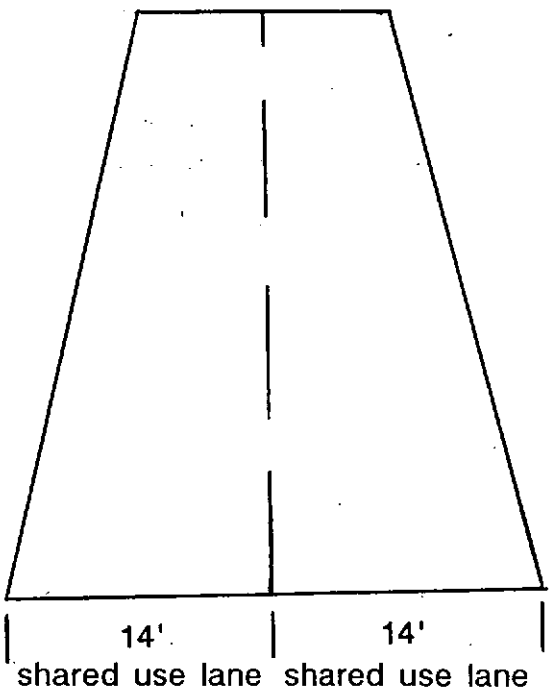
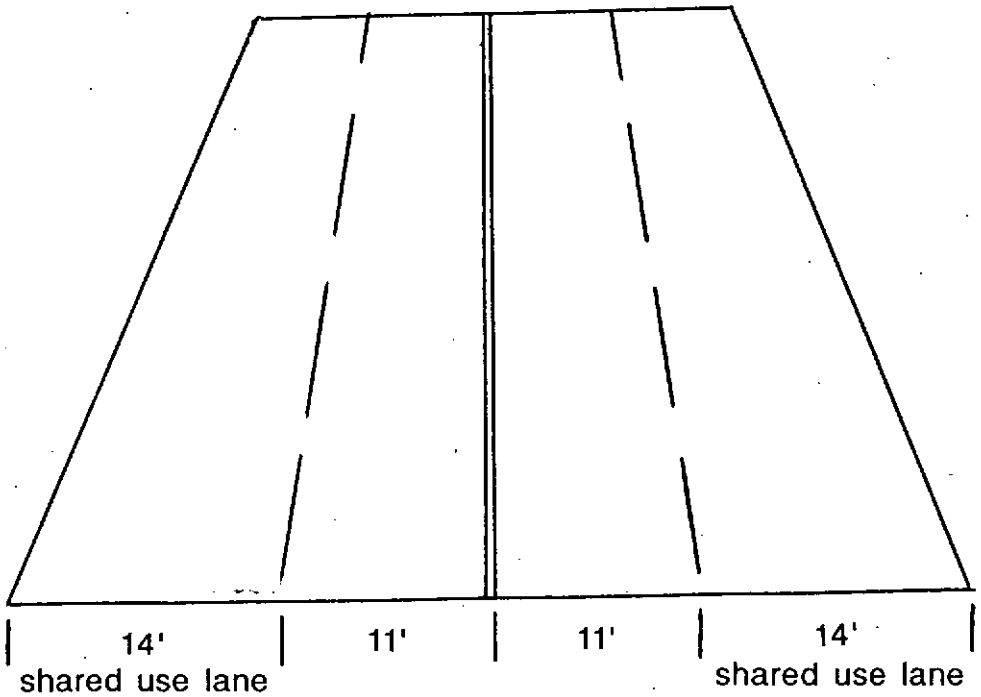


Figure 5 Wide Curb Lane



OFF-STREET TRAIL STANDARDS

This Plan designates two different types of off-street trails, natural surface trails and multi-use trails. These types of trails are also referred to as Class I facilities. These facilities are completely separated from roadways.

Natural Surface Trail

These trails will be primarily for pedestrian use though some may also be able to accommodate equestrians and mountain biking depending on the design and any use restrictions. As the name implies these trails will not be improved with a surface such as asphalt or crushed stone but will consist of a dirt surface with a variable width. The Appalachian and Catoctin Trails are examples of natural surface trails.

A specific standard for natural use trails is not provided. The design of these trails will be dependant on the topography, vegetation, use restrictions, and the proximity of environmental features such as streams. These trails should attempt to blend in with the surrounding natural environment as much as possible.

Multi-use Trail

These trails are specifically designed to accommodate several different users, including walkers/hikers, bicyclists, equestrians, and in- line skaters, at the same time. During the winter months the trials can be used by cross country skiers. The detailed corridor studies that are recommended to be undertaken following adoption of this plan would address issues such as the ability to accommodate equestrians on a particular trail. The detailed studies would also determine the type of surface for the trail which would affect the in line skaters who require a paved surface.

The surface material used on multi-use trails includes either a compacted crushed stone or asphalt. The crushed stone surface is cheaper to construct and provides a hard surface which can accommodate most bicycles. An asphalt surface would be suitable for all types of bicycles

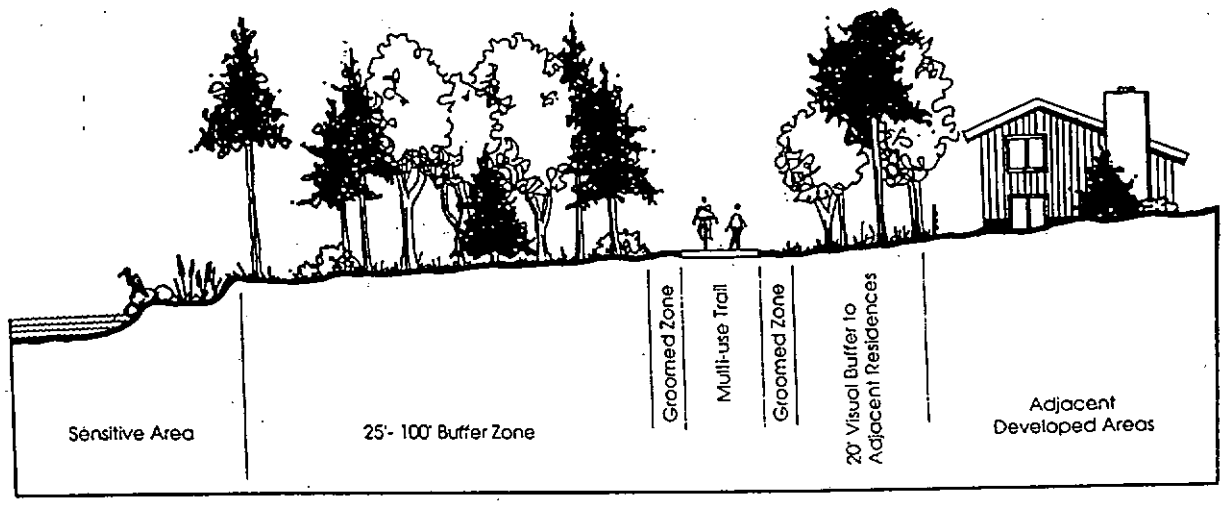
and can also accommodate in-line skating. Generally, the crushed stone surface is easier and cheaper to maintain than asphalt. It is important that an asphalt surface be properly installed with an adequate subbase. Cracking of the surface either from poor subbase preparation or from tree roots can make the trail very uncomfortable and unsafe for some bicyclists.

The width of the trail shown in the standards varies from 8 ft to 12 ft. Though many sources recommend a minimum of 10 ft to accommodate multiple users with two-way traffic, an 8 ft width can be adequate for trails through rural areas that are not expected to have heavy traffic. Within the more developed areas a 10 ft width should be the minimum.

Since many of the trail corridors are proposed along streams and the Monocacy River special consideration will need to be taken to minimize any adverse impacts on the stream or adjoining wetlands. Figure 6 show a typical section for a multi-use trail along a stream or other sensitive area. Issues related to the environmental impacts from trails would be addressed as part of more detailed studies of individual trail corridors. This process is discussed in more detail in the Off-Street Trails chapter.

Figure 6

Typical Trail Section Adjoining Sensitive Areas



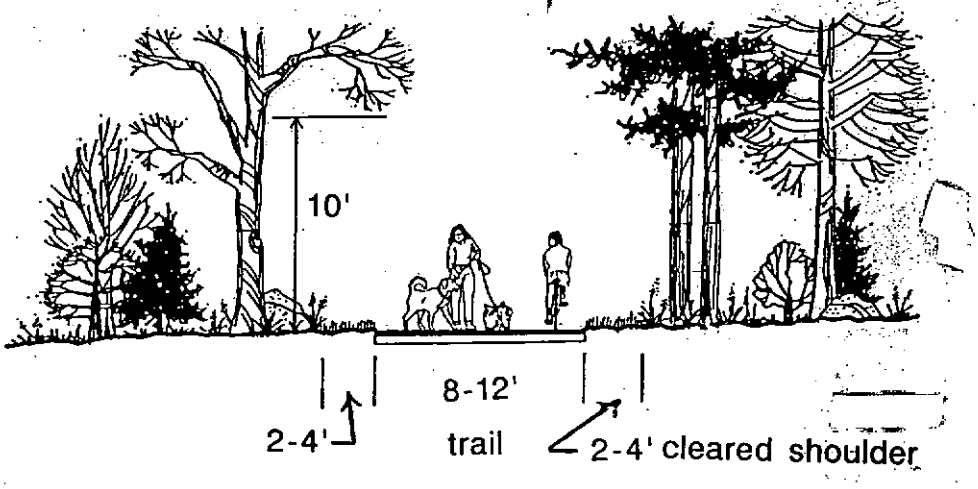
Source: Current Planning Guidelines and Design Standards Being Used by State and Local Agencies for Bicycle and Pedestrain Facilities, FHWA, August 1992.

Single Track

Most multi-use trails have a single track to accommodate the various users. This design would include an 8-12 ft wide trail with a grass shoulder on both sides that should be 2-4 ft in width. Whether equestrians can be accommodated on this type of trail would be determined on a case by case basis. In rural areas which would not experience heavy bicycle and pedestrian traffic a single track trail can safely accommodate equestrians.

Figure 7

Multi-Use Trail Single Track



Double Track

If there is enough right-of-way that is mostly cleared, a corridor, with two parallel tracks or trails could be considered to provide greater separation of the various users. This type of trail would be especially useful where equestrians are permitted. The primary trail could be constructed with a crushed stone or asphalt surface to accommodate bicyclists, pedestrians, and in- line skaters while the second trail would use a grass or natural surface for equestrians, pedestrians, or those with mountain bikes. The second trail could be separated from the primary trail by a strip of vegetation or it could involve an wider grass shoulder of 4-6 ft. rather then the minimum 2-4 ft.

Figure 8

Multi-Use Trail Double Track

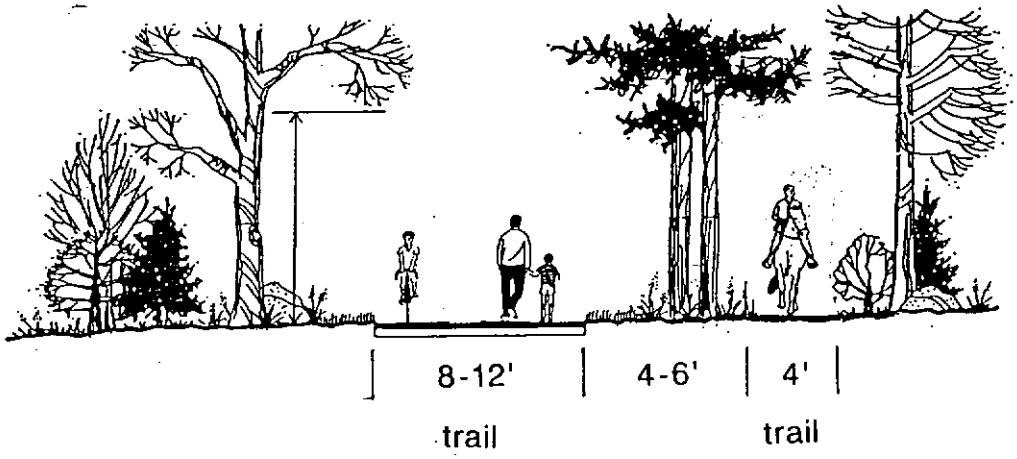
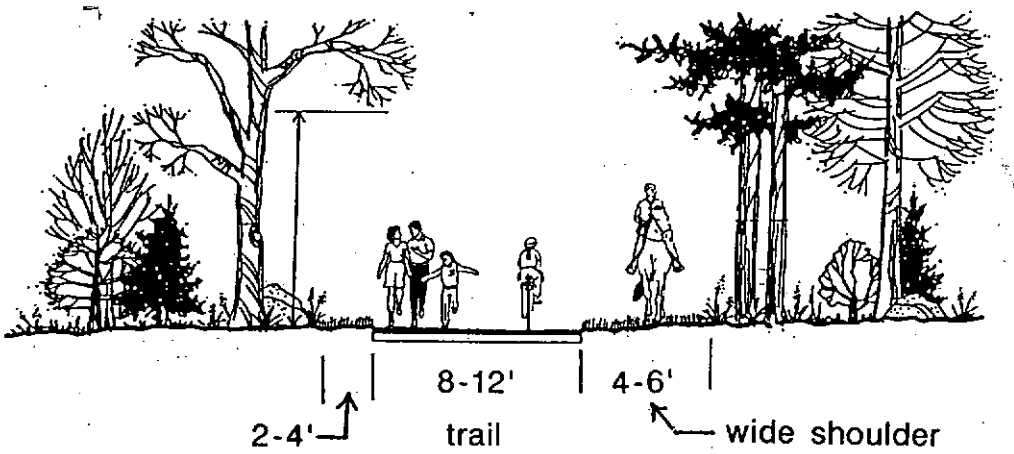


Figure 9

Multi-Use Trail Double Track



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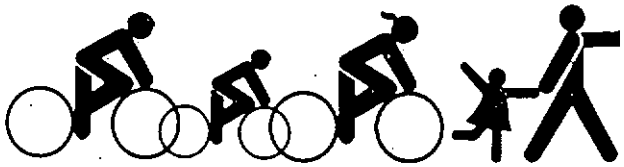
On-Street Bikeways



This Plan proposes to designate a total of 334 miles of on-street bikeways which includes County, municipal and state highways.

In determining which roads to designate as a bikeway several criteria were used to identify a countywide network of on-street bikeways. These criteria could also be used to determine the type of bikeway improvement that would be appropriate for a particular road. It is important to note that being designated as a bikeway in this Plan does not imply that the road is presently suitable to accommodate bicyclists. While some of these roads do have shoulders wide enough to meet the minimum standards for shoulder use or as a bike lane most of the roads do not have enough width to separate motor vehicle traffic from bicyclists. The purpose of being designated as a bikeway is to identify roads that should be targeted for bikeway improvements. The criteria used to identify the network and to help determine the appropriate improvements are noted below:

- **Traffic Volume**
  Higher traffic volumes create greater risk of accidents with overtaking motor vehicles and creates situation which are more uncomfortable for basic cyclists. Generally the higher the volumes the greater the need to provide cyclists with an improved facility.

- **Motor Vehicle Operating Speeds**
  As with volumes, the higher the average motor vehicle speeds the greater the need for improvements for bicyclists.

- **Demand**
  Since there isn't any formal data on bicycle traffic, local knowledge would be used to determine if certain routes attract a high number of cyclists on a regular basis.

- **Trip Purpose**
  This would distinguish between transportation trips and recreational trips. Transportation trips include commuting, shopping, and other types of trips with specific destinations. Recreational trips would include those cyclists traveling to a park facility or just going for a recreational ride.

- **Access and Continuity**
  Access should be provided to specific destinations whether they be recreation oriented or transportation oriented. The network should have as few missing links as possible to maintain continuity between trip origins and destinations.

PLAN CONCEPT

A network of on-street bikeways will serve multiple purposes for recreational cycling, commuting to work, or riding to the store or to school. The designated bikeways will connect existing and proposed growth areas as well as parks and recreation areas. These and other plan concept elements for on-street bikeways are described below.

Provide a Countywide Network

It is not the intent of this Plan to designate every road that is used by bicyclists. Rather this Plan proposes a network that links Frederick City along major corridors in a hub and spoke network through the County. Approximately 316 miles of roadways are designated for bikeways in this Plan. The spokes are also linked together to provide cross county connections. This network will provide countywide access on improved bikeway facilities for cyclists who can then gain access onto other roads that because of low traffic volumes and speeds are comfortable for cycling but do not necessarily need to be improved with bicycle facilities.

Identify for Bikeway Improvements

Designation of the roads for on-street bikeways does not imply that these roads currently meet the design standards described in this Plan. The roads designated in this Plan will allow the County and the State to target improvements to bring these roads up to the minimum standards for bikeway facilities.

Serve Transportation and Recreational Trips

The bikeway connections between and within the County's growth areas will help to accommodate those who could commute to work on their bicycle. The on-street bikeways will also help to facilitate other transportation trips for shopping, visiting friends, or running errands. The bikeways will also serve cyclists on recreational trips whether the trip itself is for touring the County or to access a park. Every municipality within the County is connected with a designated bikeway.

Provide Regional Connections

The proposed network will provide on-street bikeway connections to all adjoining counties. This will provide continuity across the state as other counties adopt designated bike routes.

Accommodate all types of Cyclists

Improvements to the designated roads will help to accommodate both advanced cyclists and basic cyclists. Basic cyclists will require bike lane improvements while advanced cyclists would be able to use any of the improvements proposed for on-street bikeway design standards.

ISSUES

There are a number of issues related to the implementation of an on-street bikeway network. The opportunity exists to construct on-street bikeways fairly quickly to provide a visible improvement for bicycles in the County.

Application of Design Standards

The designation of on-street bikeways does not specify the type of improvement for each road. The application of an appropriate design standard to individual roads would be handled on a case by case basis. Coordination between the Planning Department, Department of Public Works, and the State Highway Administration will be necessary to determine which standard should be used on a particular road. Input from a bicycle advisory group would also be used in this process.

Liability

One issue with liability involves whether on-street bikeway improvements that do not meet the minimum standards should be signed as a bike route. This would apply to the use of wide curb lanes or a bicycling area that does not meet the minimum width of four (4) feet recommended for bicycle facilities. Several reports do not recommend placement of bike route signs along facilities that are not at least four (4) feet wide except in special situations where no other route exists to reach a certain destination.

Implementation

The County will need to consider whether to establish a separate program to address bikeway improvements along existing roads or whether bikeway improvements can be incorporated into the existing widening and overlay programs which are administered through the Department of Public Works. In addition to the initial construction of bikeway facilities is the need to provide maintenance including restriping of the roadways, installing signs, keeping debris off of the bikeway, and general upkeep of the pavement itself. Many counties have initiated programs where cyclists can submit standard forms which identify maintenance or safety problems to be addressed either by the County or the State Highway Administration depending on the road.

Coordination

Every municipality in the County has a proposed on-street bikeway extending through its corporate boundaries. Improvements and signage will need to be coordinated to ensure continuity of the bike routes between the County and the towns. The State Highway Administration will also need to be a partner in the funding and construction of improvements to the state highways that are designated in this plan.

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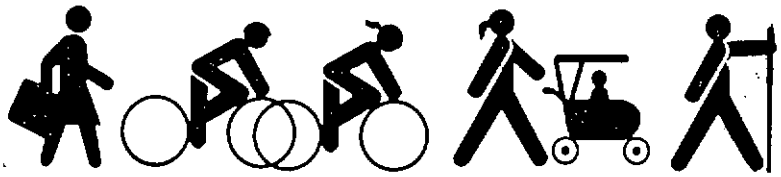
Off-Street Trails



This chapter will describe the plan concepts for off-street trail corridors and will provide a profile of each corridor including issues that will need to be addressed by subsequent studies. Off-street trails will include both multi-use trails which can accommodate cyclists, hikers/walkers, and equestrians and natural surface trails which are primarily for hikers/walkers and equestrians. This Plan proposes a total of 174 miles of off-street trails. This would be in addition to the C&O Canal, the Appalachian Trail, and the Catoctin Trail.

The popularity of trails stems from their ability to accommodate large percentages of the population. Walking is perhaps the simplest exercise one could do whether one is 5 years old or 50 years old. There is generally a much larger proportion of the population that can participate in walking or bicycling activities versus organized team sports or something like golfing.

For young children who are getting started in cycling, off-street trails provide a much safer environment then using the streets. As they gain more experience from cycling on the trails children will be better prepared to use the streets as they get older.

PLAN CONCEPTS

Follow Linear Features

Many of the proposed trail corridors follow streams and the Monocacy River. While the County does not have a park system incorporating stream valleys they still provide an opportunity for a continuous corridor through the County.

Though the Plan does not identify any trail corridors along existing utility right-of-ways there may be opportunities in the future to incorporate trails along existing or proposed utility lines. Since many water and sewer lines run along streams and the Monocacy River, construction of the utility lines can offset much of the construction costs for a trail. It is recommended that new utility line projects consider whether a trail may be appropriate.

Rails-to -Trails Conversions

From the 1890's to 1953 Frederick County was served by an electric trolley system that connected Thurmont, Frederick, Middletown, Myersville, and Jefferson. The long since abandoned right-of-way from this system is proposed to be converted to trails between Thurmont and Frederick and from Frederick through Middletown to Myersville. A trail along the old Emmitsburg Railroad between Rocky Ridge and Emmitsburg is also proposed.

Regional Connections

Several corridors identified in this plan have the potential to link with other trails and greenways to provide regional and statewide trail connections. The proposed trail corridors will provide connections to both the C&O Canal and the Appalachian Trail. Trail corridors are also proposed to connect with potential trails along: the Patapsco and Patuxent Rivers in Howard and Montgomery Counties; the I-270 corridor transitway; and along Little Bennett Creek.

Accommodate Multiple Users

As the name implies multi-use trails can accommodate a variety of activities. Depending on the design and the surface material, a multi-use trail can be used by walkers/hikers, cyclists, in line skaters, equestrians, and cross country skiers. Since many of the trails are proposed within stream valleys there are opportunities for those persons who want to use the trail to experience the natural setting of the corridor.

CORRIDOR STUDIES

The trail corridors identified in the Plan are conceptual in nature and will require more detailed study for each individual corridor. These corridor studies would be broken into three phases: planning; design/engineering; and construction. The planning phase should look at the entire length of the corridor while the design/engineering and the construction phases can be completed on a section by section basis. The components of each of these phases is listed below.

Planning

- Include a public participation process
- Identify alternative alignments for the trail within the corridor
- Identify and address environmental impacts.
- Identify property ownership
- Delineate phasing of the trail
- Identify operational characteristics such as surface type for the trail, bridges etc.
- Estimate right-of-way and construction costs

Design/Engineering

- Prepare drawings with specific location of trail and the necessary right-of-way needs.
- Provide design of bridges and other structures including street crossings.
- Identify need for signage, fencing etc.
- Develop right-of-way and construction costs

Construction

- Prepare necessary plats or easements for the right-of-way.
- Build the trail

The public participation process that would be conducted during the planning phase would solicit comments from the general public and especially from the property owners who would be directly affected by the proposed trail. How the planning and design phases progress will be determined largely on the willingness of the property owners to provide the necessary right-of-way. While donations of land in fee simple or providing access easements would certainly be

welcomed by the County it is expected that the County would pay for the necessary land or for easements. The County would not use eminent domain to get the necessary land for a trail. If the necessary land can not be acquired then the County would either consider alternative routes or would drop that particular section of the trail.

ISSUES

This Plan recognizes the need for additional study for each of the off-street trail corridors identified here. Described below are general issues that will need to be addressed in most if not all of the corridors. The corridor profiles identify additional issues that are specific to that particular corridor.

Property Impacts

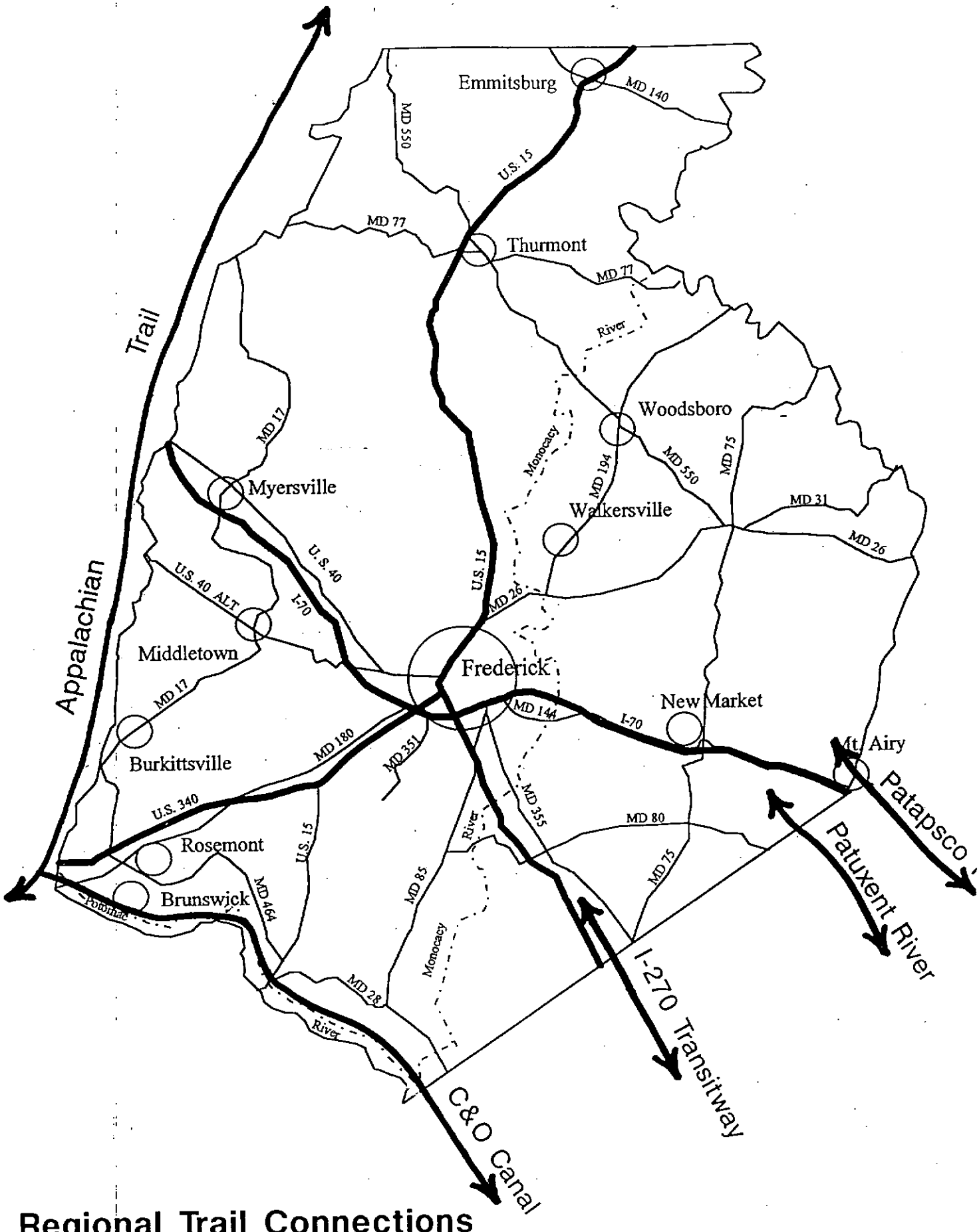
Since there is very little land under public ownership along the streams and other corridors the County will need to work with multiple owners during the subsequent corridor studies. It will be very important to bring the property owners into the process as early as possible. There are three ways to address getting the necessary right-of-way. The first is through the development review process where the right-of-way may be reserved or dedicated for a trail. The second involves the donation by the property owner of the right-of-way to the County. The third option is for the County to negotiate either the purchase of an access easement for the trail or to purchase the land is fee simple.

Where land within a trail corridor is owned by a homeowners association there may be opportunities for the homeowners association to assume some of the responsibilities for maintenance of the trail through their property. Agreements with the respective government would be necessary to outline the responsibilities and liability.

Environmental impacts

With several trail corridors identified along streams and the Monocacy River it will be important to consider the environmental impacts related to having a trail in close proximity to the stream. The delineation of the various environmental features and how they would be protected would be addressed during the planning and design phases described under the corridor studies. The Design Standards chapter includes a typical cross-section (Figure 6) of a trail near a sensitive feature. The most important aspect of this cross-section is the need to have an adequate buffer between the trail and the stream or river. At a minimum the detailed corridor studies would consider the following environmental features:

- stormwater management
- plant and animal habitat protection
- wetlands
- riparian buffer protection
- archeology sites
- steep slopes
- historic sites and structures



Regional Trail Connections

Figure 10

CORRIDOR PROFILES

The following profiles describe each of the proposed trail corridors including information about destinations

H&F Trolley Trail

Location: Thurmont to Frederick (See Figure 11)
Length: 14 miles
Type of Trail: Multi-Use
Jurisdiction: County, Frederick City, Town of Thurmont

This trail would follow the alignment of the Hagerstown and Frederick (H&F) Railroad which operated electric trolleys on this line from 1908 to 1953. The right-of-way does not follow any linear features such as streams. The corridor crosses through agricultural land and rural residential areas. The right-of-way is approximately 30-35 feet in width and still accommodates electric utility lines along it.

The first phase of the trail, between E. Main St. and Water St., was constructed by the Town of Thurmont and was opened in October 1998.

The trail would connect Thurmont, Lewistown, and Frederick. Destinations along the corridor include Cunningham Falls State Park and the Catoctin Furnace, the Utica covered bridge, Catoctin Zoo, and the Yellow Springs and Lewistown Elementary schools. The H&F Trolley Trail could connect with the Carroll Creek trail which would provide a link to the Monocacy River. Just north of
Frederick City the trail could link with the Tuscarora Creek trail corridor which would also provide access to the Monocacy River.

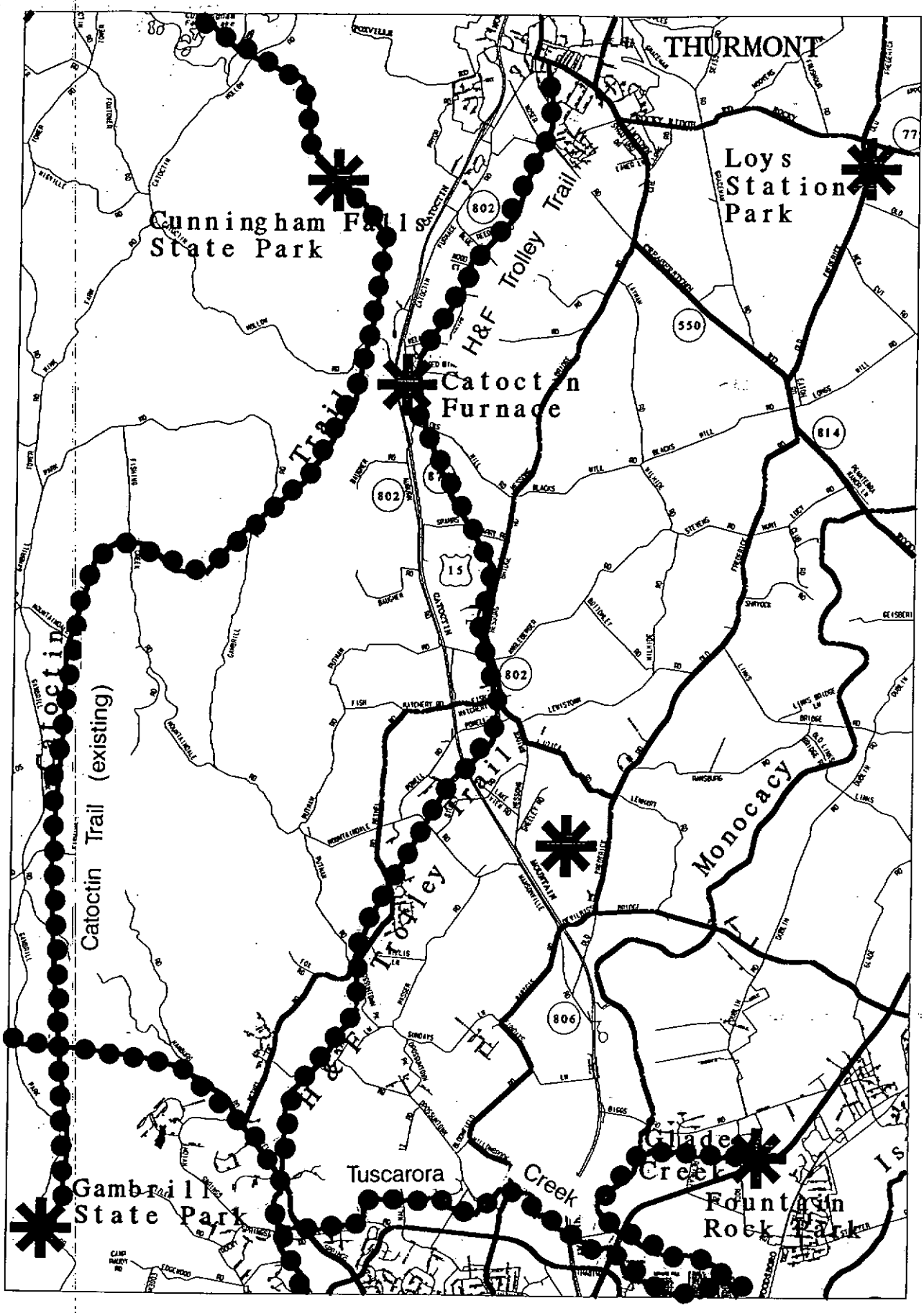
Issues

- Ownership of the right-of-way is privately held with multiple owners.
- There are several areas where existing residences are very close to the right-of-way. There is at least one stretch where the right-of-way is used as a driveway to access several residences.
- The trail would traverse active farming operations.
- Crossing US Rt. 15 via a tunnel.

Ballenger Creek Trail

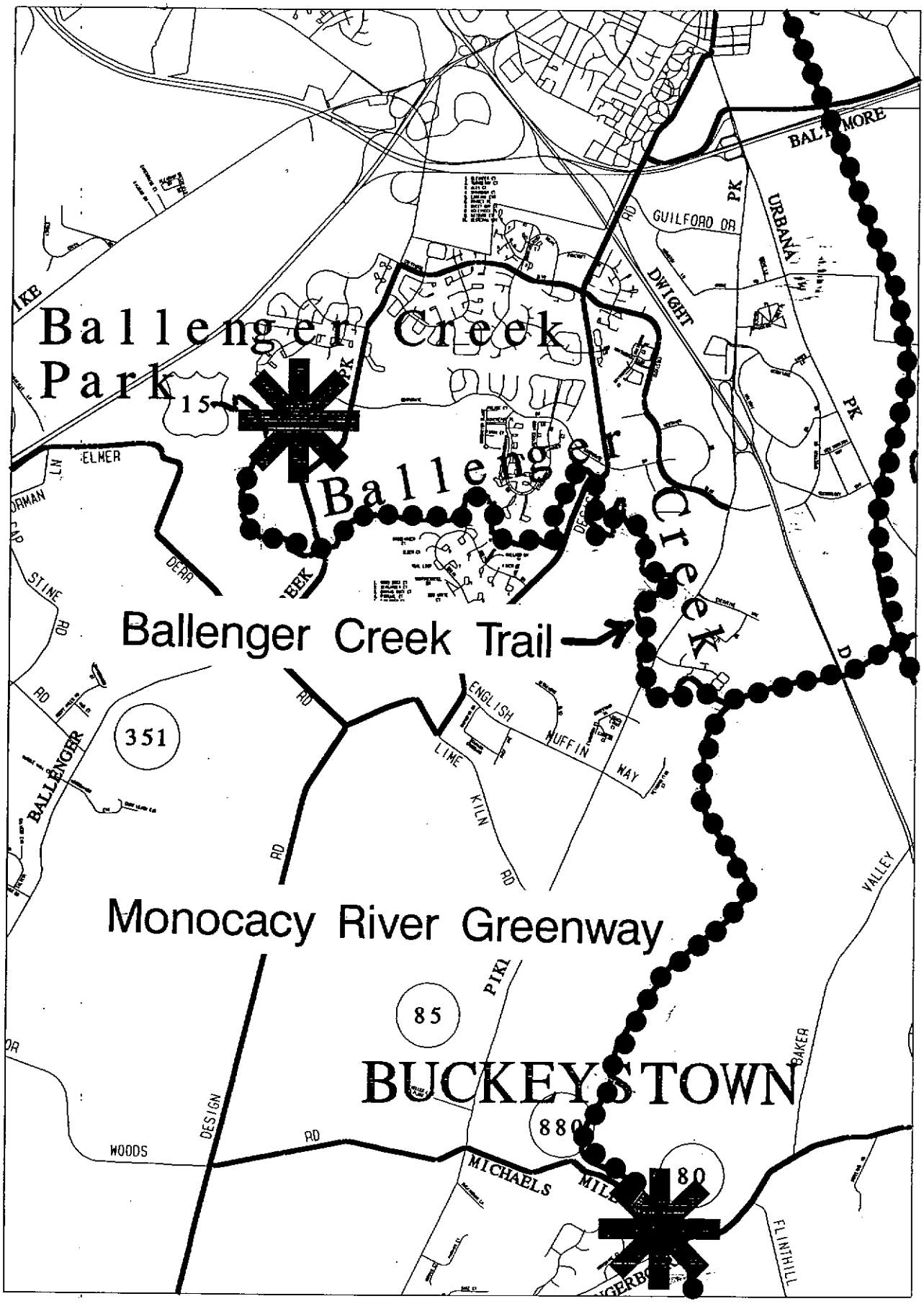
Location: Ballenger Creek Park to the Monocacy River (See Figure 12)
Length: 4 miles
Type of Trail: Multi-Use
Jurisdiction: County

This trail would run along Ballenger Creek to provide a connection between the County's Ballenger Creek Park and the Monocacy River. The entire corridor is within the Ballenger Creek growth area which includes residential development between Ballenger Creek Pike and New Design Rd. with employment uses between New Design Rd. and the Monocacy River. Portions of the floodplain adjacent to the existing residential development have been set aside as open space under the respective homeowner associations. The trail would be located within the 100 year floodplain of the creek which mostly cleared with tree lines along the creek banks.



Off-Street Trail — On-Street Bikeway

Figure 11



Off-Street Trail — On-Street Bikeway

Figure 12

This trail could serve recreational purposes for the residents in the Ballenger Creek area and provide access to the Ballenger Creek Park and the Monocacy River. The trail could also serve as a transportation route between the residential areas on the west end of the corridor with the employment uses on the east end and along the MD 85 corridor. Access to the proposed Central County high school, which will be located along Ballenger Creek Pike, from the residential areas may also be accommodated by the trail.

Issues

- Environmental impacts on the stream from having a trail in the floodplain.
- Accommodating crossings of several arterial roads: Ballenger Creek Pike; New Design Rd.; MD 85.
- Crossing the CSX railroad tracks
- Procuring easements from the homeowner associations to allow for the trail.

Rock Creek Trail

Location: Stonegate Park to US Rt 15 (See Figure 13)
Length: 2 miles
Type of Trail: Multi-Use
Jurisdiction: Frederick City

Portions of this trail exist between Bel Aire Ln and Baughmans Ln. The entire trail corridor is located within the 100 year floodplain of Rock Creek. The corridor runs through medium and high density residential areas as well as some commercial areas including Fredericktowne Mall. With the exception of one or two properties the entire corridor is currently developed. Most if not all of the floodplain along Rock Creek has been dedicated to the City through the development review process. The portion along Fredericktowne Mall is likely still in private ownership.

Frederick City has applied for funding to construct missing sections of the trail and to upgrade the existing trails.

The trail would provide access to three parks along the corridor located at the western terminus in the Stonegate development, off of Key Parkway, and a third at the eastern end by the Waterford development. This trail could connect with the proposed Carroll Creek trail just west of US Rt 15 which would provide access to Baker Park and downtown Frederick. In addition to its use for recreational purposes this trail could also serve as a transportation route providing access to the commercial areas along Rt 40 and to downtown Frederick.

Issues

- Environmental impacts on the floodplain
- Existing trail does not meet standards for multi-use trails
- Consider whether existing trail should be relocated to north side of Rock Creek to take advantage of better topography and to have the trail further from the stream bank.
- Will have six road crossings
- Portion adjacent to Fredericktowne Mall would require removal of existing parking area to provide enough room for a trail.

Carroll Creek Trail

Location: Rocky Springs Rd. to the Monocacy River (See Figure 13)
Length: 4.5 miles
Type of Trail: Multi-Use
Jurisdiction: Frederick City

This trail would be located along Carroll Creek for its entire length. Most of the corridor is already developed with mostly residential uses with some commercial uses in the Old Farm development. The downtown portion of the corridor is currently undergoing redevelopment as a result of the flood control project which has opened the land immediately adjacent to the creek for development. The new development in the downtown section will include a mix of office, retail, and some residential. The eastern end of the corridor is currently undeveloped though it is proposed for employment uses adjacent to the airport.

Most of the floodplain has been dedicated to the City. In the undeveloped areas the City would be able to have the remaining portions of the floodplain dedicated as well. The County also owns a portion between Rocky Springs Rd. and Montevue Ln.

This trail could serve both recreational and transportation purposes. Access to downtown Frederick would be especially useful to help reduce the demands for automobile parking. This corridor would provide the only off-street trail crossing of US Rt 15. To the west this trail would be able to tie in with the H&F Trolley Trail which continues north to Thurmont.

Issues

- Environmental impacts of locating the trail in the 100 year floodplain.
- The walkways constructed in the downtown area are not suitable for multiple uses including bicycles. It is unclear whether other portions of the downtown corridor will be designed to safely accommodate bicycles.
- Existing paths through Baker Park do not meet the standards for multi-use trails.
- Using one of the existing Carroll Creek conduits under US Rt 15 for the trail.
- There will be approximately 15 road crossings from Rocky Springs Rd. to the Monocacy River.

Tuscarora Creek Trail

Location: Yellow Springs Pike to Monocacy River (See Figure 13)
Length: 4.5 miles
Type of Trail: Multi-Use
Jurisdiction: County, Frederick City

This trail would follow Little Tuscarora Creek from its connection the H&F Trolley Trail to Tuscarora Creek and on the Monocacy River in the Vicinity of Waterside. Most of this corridor is under residential development within Frederick City. Some of the floodplain along the creek has been dedicated to the City for public park land.

The trail would serve both recreation and transportation needs. Access would be provided to the Monocacy River and to the H&F Trolley Trail. Recreational fields and facilities area also likely to be located along the corridor as part of the residential developments that are proposed in this part of the City. Transportation access could be provided to the employment area along Trading Lane. A trail along the old Pennsylvania Railroad line going into downtown Frederick would

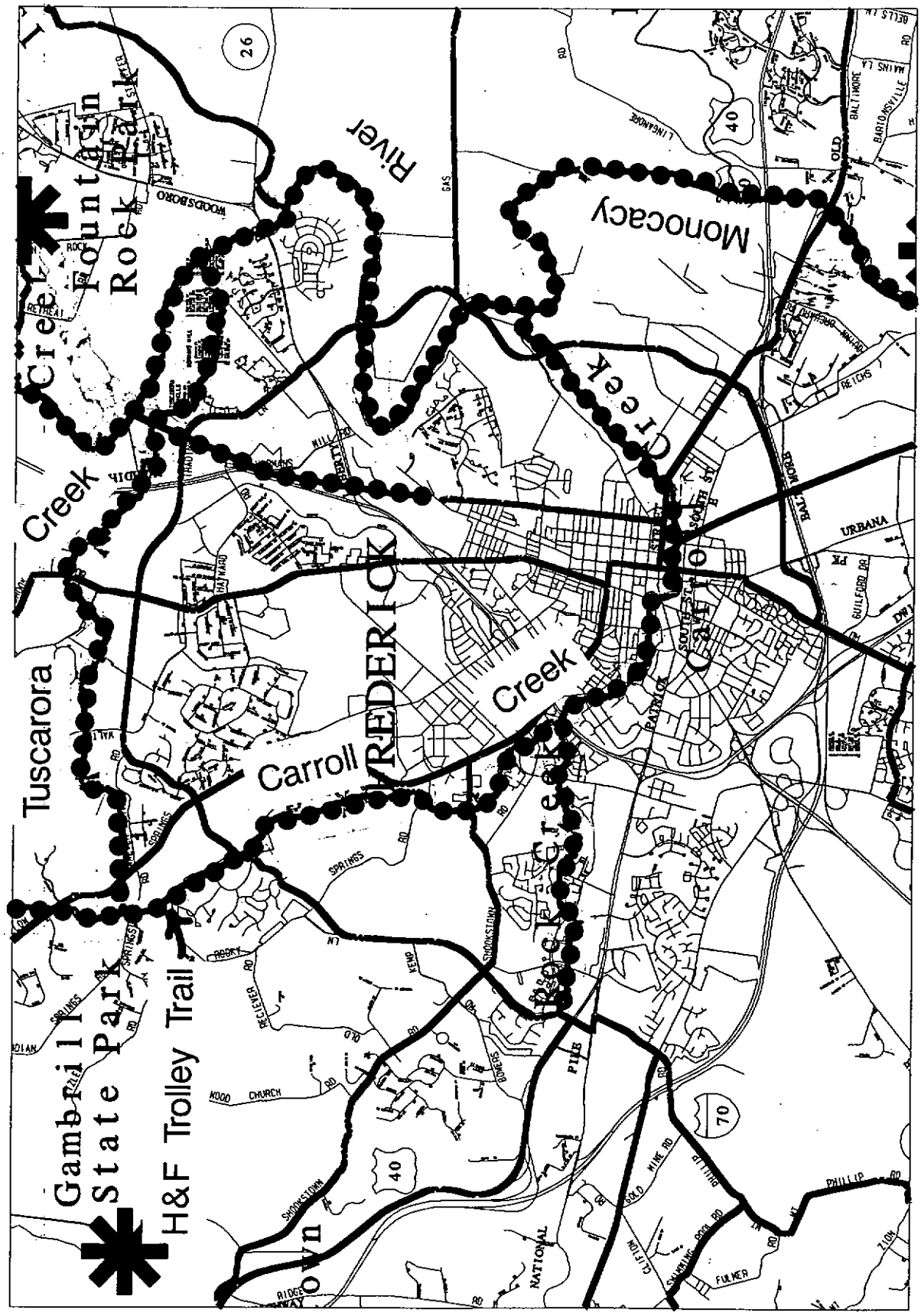

Creek
Fountain
Rock
Park
River
Monocacy
Creek
Tuscarora
Creek
Carroll
Creek
FREDERICK
Gambrill
State
Park
H&F Trolley Trail
Off-Street Trail
On-Street Bikeway

Figure 13

provide additional access form the Tuscarora Trail to commercial and employment areas in downtown Frederick.

Issues

- Environmental impacts from locating the trail within the floodplain of the creek.
- Crossing US Rt. 15 and the old Pennsylvania Railroad tracks.

Monocacy River Greenway

Location: From Glade Creek to the Potomac River (See Figure 14)
Length: 25 miles (4.2 miles between Tuscarora Creek and Carroll Creek)
Type of Trail: Multi-Use
Jurisdiction: County, Frederick City, National Park Service, Maryland DNR

The Monocacy River is one of the most visible natural features in the County. The Monocacy is one of the most often mentioned corridors, by the public, to have a parallel trail. The corridor is primarily in agricultural use except for the central section around Frederick City which has developed with residential uses and some industrial and commercial uses. The west side of the River south of I-270 has also developed with office and industrial uses. Very little of the floodplain along the River is under public ownership.

In 1994 the County funded a Monocacy River Greenway study for the Frederick County Trails Committee. One of the goals of the study was to develop a vision for a Monocacy River Greenway. The conceptual master plan developed in the study recommended that a trail system only be developed for the portion of the corridor from Walkersville south to the Potomac. The River from Walkersville north was recommended to be maintained as a conservation area due to the more rural and agricultural nature of the area.

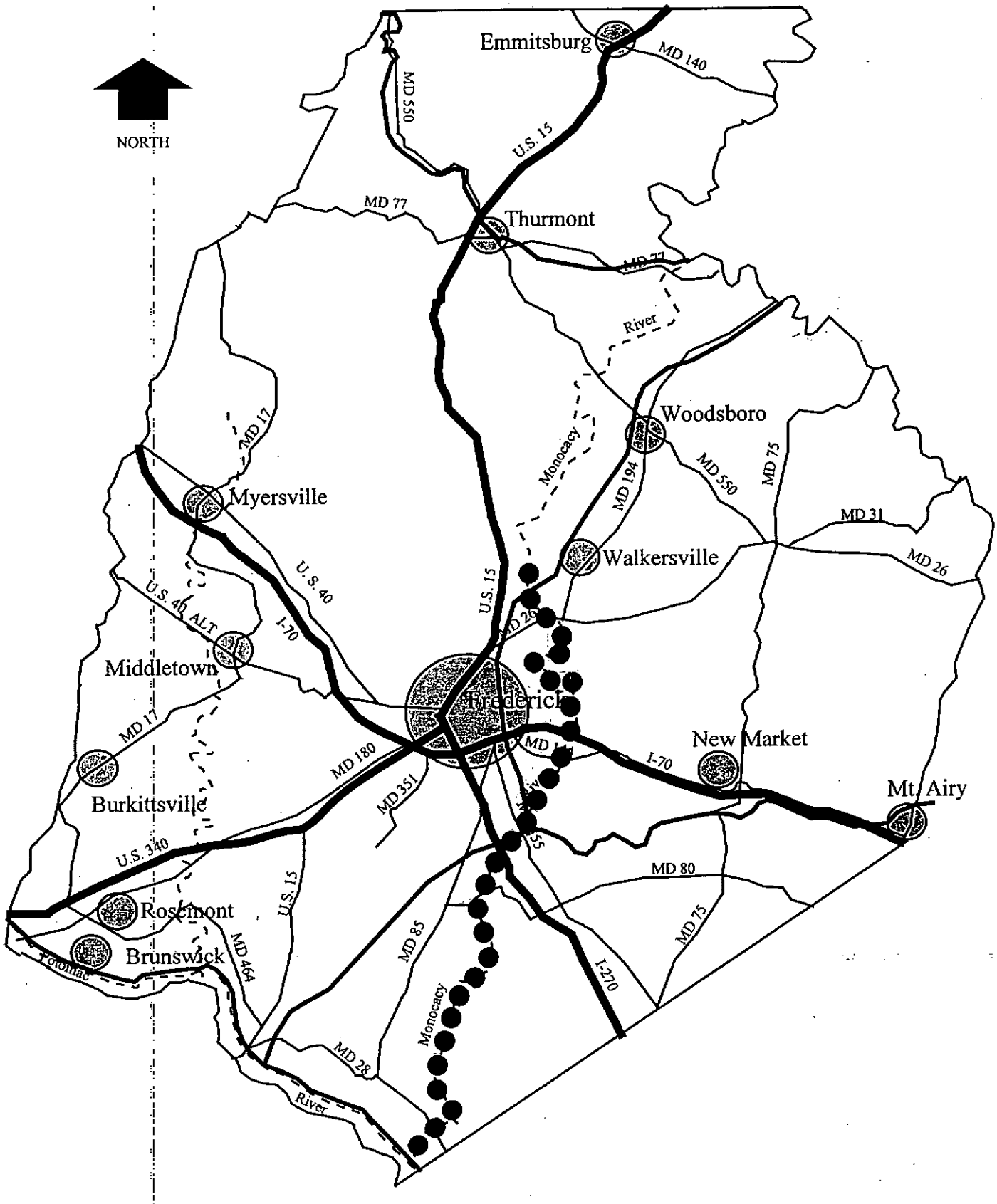
The primary use of this trail would for recreation. There are several parks along the Monocacy including the County's Pinecliff and Buckeystown parks, the Monocacy National Battlefield Park, and the C&O Canal. Other parks that could be accessed from connecting trails include Fountain Rock, Ballenger Creek, Baker Park, and the Sugarloaf Mountain area. Though not improved with any trails or facilities the Monocacy River trail would also provide access to the State's Monocacy Natural Resource Area.

Issues

- Protecting the riparian buffer along the river.
- The topography along the river is varied areas with steep bluffs and generally rolling terrain.
- Assembling the right-of-way through easement or fee simple purchase.
- Integrating the trail with improvements in the Monocacy National Battlefield.
- There are 12 bridge crossings over the river which includes two railroad bridges.

Sugarloaf - Little Bennett Trail

Location: From Little Bennett Regional Park to the Monocacy River (See Figure 15)
Length: 5.5 miles
Type of Trail: Natural Surface
Jurisdiction: County, Montgomery County, Maryland DNR



Monocacy River Greenway

Figure 14

The eastern portion of this trail would follow Little Bennett Creek from Montgomery County's Little Bennett Regional Park east of Hyattstown to Sugarloaf Mountain. The middle section on the Stronghold property would follow existing trails around Sugarloaf Mountain. The western section could either follow Furnace Branch or an old railroad alignment that was used during the construction of the C&O Canal. Most of the corridor is under either public ownership or within the Sugarloaf Mountain property which is protected under private non-profit ownership.

A second connection into Montgomery County is proposed in the vicinity of Mt. Ephriam Rd. and would connect Sugarloaf Mountain with the South Germantown park and recreation areas. The portion of this trail in Frederick would be approximately ½ mile in length. It would be developed as a natural surface trail.

As a natural surface trail it would be used only for recreational purposes. This type of trail would be consistent with the existing trails on Sugarloaf Mountain which can only be used by hikers and equestrians, with some trails open to mountain biking. The natural character of Sugarloaf Mountain and the Monocacy Natural Resource Area is more in keeping with having a natural surface trail which would require minimal disturbance of the terrain and vegetation.

Issues

- Coordination with Montgomery County and Maryland DNR
- Identifying an appropriate alignment through the Monocacy Natural Resource Area.
- Crossing I-270 and MD 355

I-270 Transitway

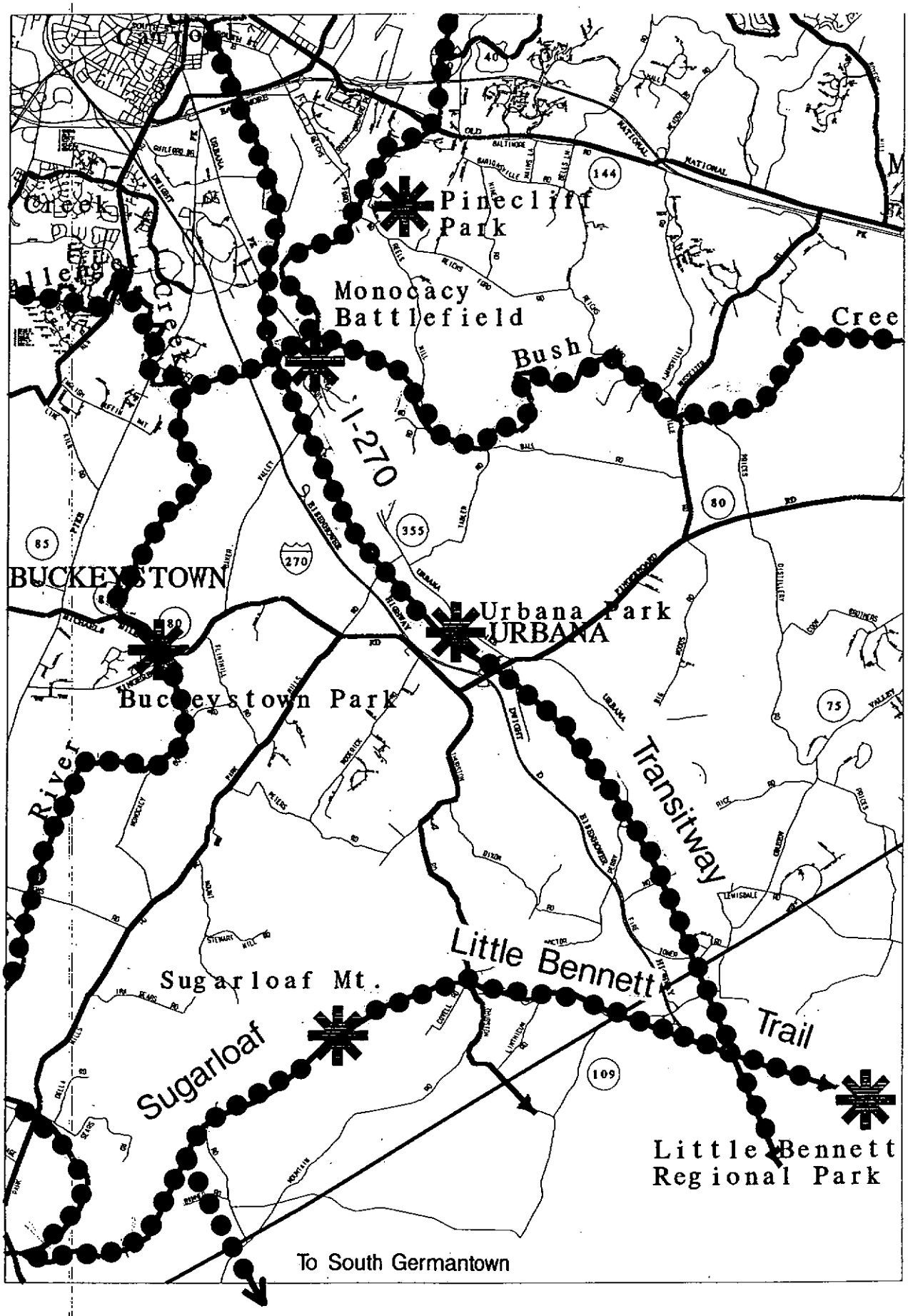
Location: Along I-270 corridor (See Figure 15)
Length: 10 miles (from the downtown MARC station to the County line)
Type of Trail: Multi-Use
Jurisdiction: County, Montgomery County

The I-270 Transitway is proposed to accommodate either a light rail system or a busway between Frederick and the Shady Grove Metro system. A trail has been proposed to be located within the right-of-way of the transitway. Within Frederick County the transitway is along the east side of I-270 with a diversion through Urbana. Approaching Frederick the trail could either terminate at the Monocacy River or continue along the transitway following the Frederick Branch into downtown Frederick to the MARC station.

This trail would serve both recreation and transportation purposes. Within Frederick County access could be provided to the Monocacy River and to the Little Bennett trail. The transitway trail would also provide access to Montgomery County's trail system. With the growth in residential and employment uses along the I-270 corridor this trail would have considerable potential to serve transportation needs for commuting trips.

Issues

- Incorporating the trail design with the transitway and adjoining streets. The alignment will require several bridge crossings.
- Crossing through the Monocacy National Battlefield
- Ensuring that any right-of-way reservation or dedication for the transitway can accommodate the trail.



Off-Street Trail — On-Street Bikeway

Figure 15

Bush Creek Trail

Location: From the Monocacy River to the Montgomery County line (See Figure 16)
Length: 13 miles
Type of Trail: Natural Surface
Jurisdiction: County, Montgomery County

This trail would follow along the Bush Creek corridor and the CSX railroad tracks for most of its length. From Barthowlows Rd. east the trail would divert from Bush Creek to the southeast towards the head waters of the Patuxent River. Montgomery County has identified a proposed trail along the Patuxent River.

This trail would serve recreational users only. As a natural surface trail it would accommodate primarily hikers/walkers and equestrians. The western half of the corridor is primarily in agricultural use while the eastern portion is bounded by low density residential development. Running parallel to Bush Creek is the CSX railroad tracks which are still used for freight service between Baltimore and points west.

Issues

- Environmental impacts from locating a trail within the floodplain.
- Topography along the creek banks is varied with several steep embankments.
- Safety concern about locating a trail adjacent to an active railroad.
- Crossing the Monocacy National Battlefield land.
- Potential to coordinate potential trail use with the water and sewer utility project proposed from Monrovia to the Monocacy River.
- Identifying an appropriate alignment from Bartholows Rd. to the Patuxent River.

Linganore Creek Trail

Location: From the Monocacy River to the Carroll County line (See Figure 16)
Length: 17 miles
Type of Trail: Natural Surface
Jurisdiction: County

This trail would follow Linganore Creek from the Monocacy River following the North Fork of Linganore Creek and Weldon Creek to the Carroll County line. The western portion of the corridor runs through the Lake Linganore community which is the primary growth area for the New Market region. The eastern portion of the corridor is agricultural.

As a natural surface trail it would serve only recreational needs. The trail would be incorporated into the existing trail system around Lake Linganore and would provide a connection with the Monocacy River. Carroll County does not have any plans or proposals that would allow for the trail to extend into Carroll County. Other than Lake Linganore itself there are no public parks along this corridor.

Issues

- Environmental impacts from having a trail in the floodplain.
- Integrating the trail with existing trails around Lake Linganore.
- Allowing for public use of the Lake Linganore trails which are currently private.
- Lack of public parks and other destinations east of the Lake Linganore community.

B&O Trail

Location: Mt. Airy (See Figure 16)
Length: 1 mile
Type of Trail: Multi-Use
Jurisdiction: Town of Mt. Airy, Carroll County

This is a rail-to-trail conversion for a portion of the original B&O railroad line which was extended to Mt. Airy about 1830. The railroad was eventually relocated further south when the tunnel was constructed. The right-of-way is currently under private ownership though the Town is likely to get some dedication as the adjoining properties develop.

The trail would be used mostly for recreation though it would also provide the opportunity for transportation trips within the Town. At the eastern side of Town the trail would connect with the Watkins Regional Park. To the east the trail would be able to connect with the Patapsco River greenway along the Carroll County and Howard County line. To the west into Frederick County there is not an appropriate trail corridor to tie into.

Issues

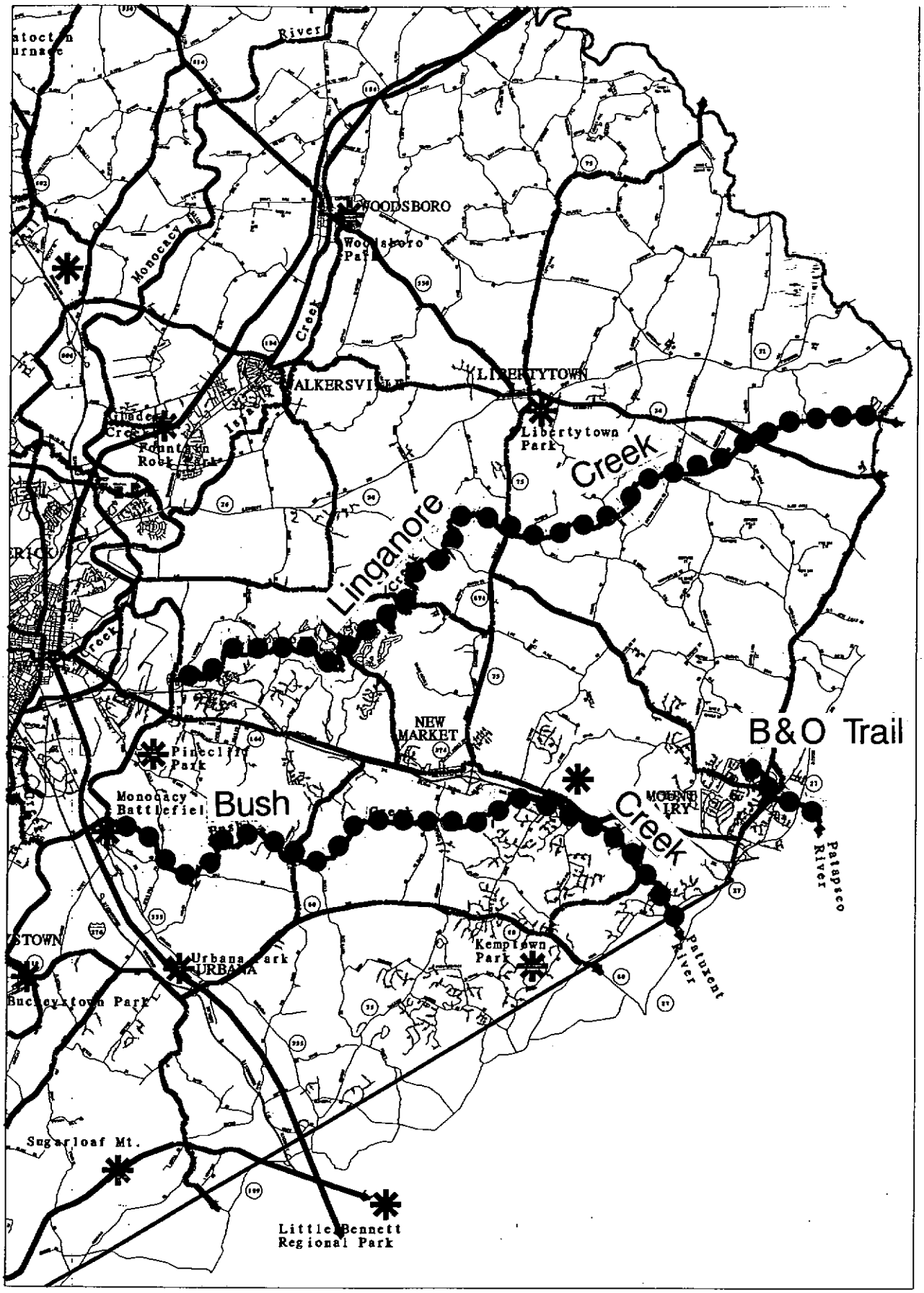
- Gaining the dedication of the right-of-way through the development process.
- Crossing MD 27

Walkersville - Woodsboro Corridor

Location: From the Monocacy River to Woodsboro (See Figure 17)
Length: 3.5 miles - Israel Creek
1 mile - Glade Creek
11 miles - railroad (from N. Market St. to the County line)
Type of Trail: Multi-Use
Jurisdiction: County, Town of Walkersville, Town of Woodsboro, MDOT

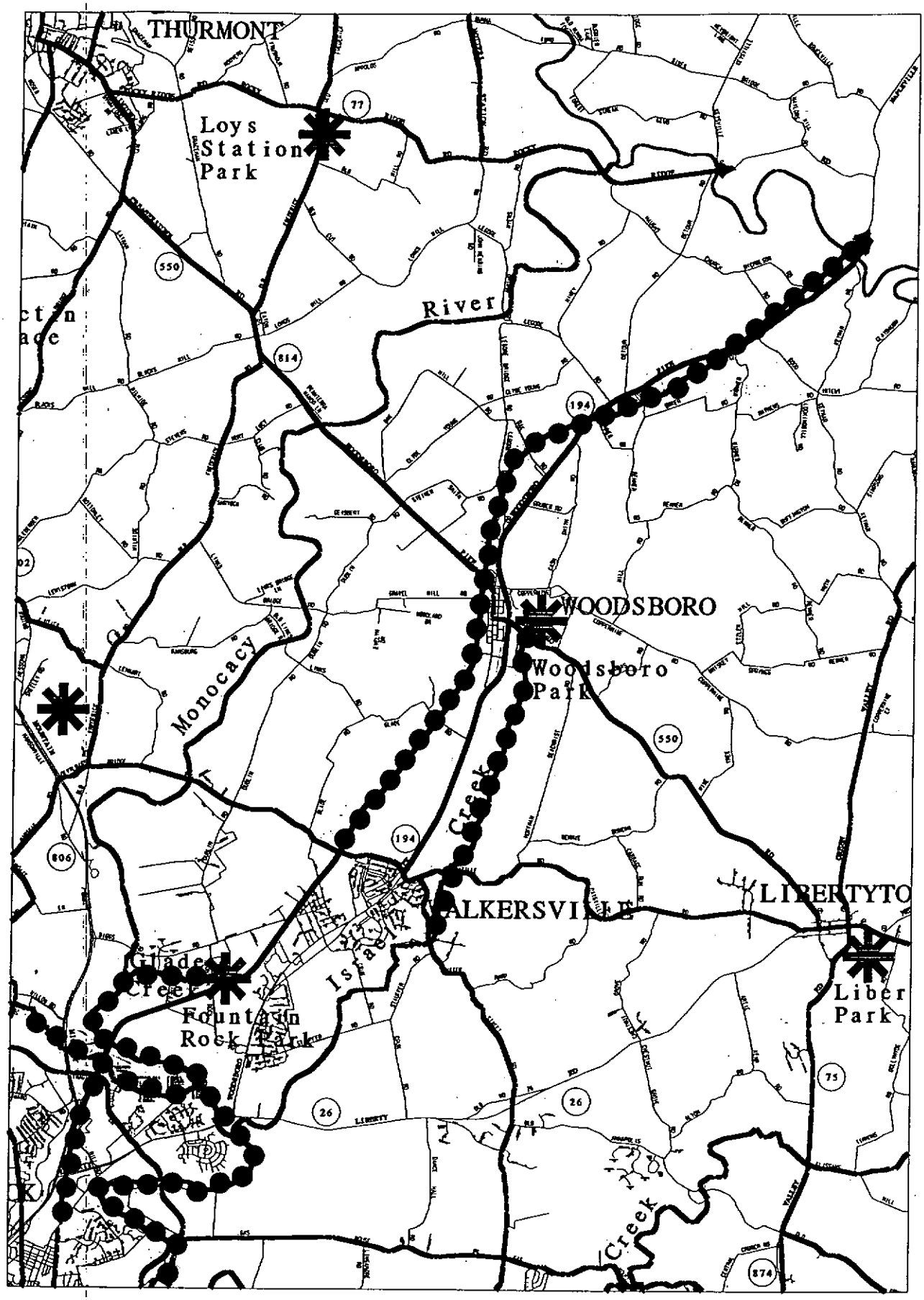
The Town of Walkersville does not support any of the trail corridors within its municipal boundary. Figure 17 only shows the portions of the trail corridors that are outside of the Walkersville municipal boundary. The mileages noted above also reflect this.
There are three potential locations for trails in this corridor. The first follows the existing railroad tracks from Frederick to Woodsboro with the ability to extend to Carroll County. Freight service is still provided on these tracks down to Walkersville and efforts have been made to open service all the way into Frederick. A trail would be considered along this alignment only if the State were to formally abandon railroad service on all or a portion of the line. If the line is ever abandoned then the trail could make use of the existing track bed. The second trail was identified along Glade Creek which would connect the Monocacy River with the County's Fountain Rock Park. The third trail would follow along Israel Creek from the Monocacy River to Woodsboro.

This corridor has both recreation and transportation opportunities. The two corridors that follow Glade and Israel Creeks would provide connections to the Monocacy River and to several local and County parks. The use of the railroad corridor could provide a direct route from Walkersville to the employment areas on the north side of Frederick City and into downtown Frederick.



Off-Street Trail On-Street Bikeway

Figure 16



Off-Street Trail — On-Street Bikeway

Figure 17

Issues

- Environmental impacts from locating a trail within the floodplain.
- The trail along the railroad line will only be feasible with the abandonment of railroad service.
- The Town of Walkersville does not support the trail corridors within its municipal boundary.

Middletown - Myersville Trolley Trail

Location: Frederick to Myersville (See Figure 18)
Length: 9.5 miles
Type of Trail: Multi-Use
Jurisdiction: County, Town of Middletown, Town of Myersville

This would be a rail-to-trail conversion on a portion of the Hagerstown and Frederick (H&F) railroad which operated electric trolleys on this line from Frederick to Hagerstown. This line opened for trolley service in 1896 and was abandoned in the 1930's and 1940's. The eastern portion of the corridor has been developed with mostly residential uses. It has not been determined if the corridor is still protected as an electric utility right-of-way. The portion of the corridor between Middletown and Myersville is in agricultural use.

The trail would be primarily for recreation though could serve as a transportation route into the west side of Frederick City. Rather than following the old trolley alignment down Main St. in Middletown the trail would connect with a Middletown Greenway which circles around the Town. Access would be provided to the County's Middletown Park and to the Middletown school complex.

Issues

- Identifying an appropriate terminus where the trail would enter Frederick City.
- Crossing I-70 along US 40A and on MD 17 in Myersville
- The grade over Braddock Mountain
- It needs to be determined if the original right-of-way is still intact.
- Agricultural impacts between Middletown and Myersville

Middletown Greenway

Location: Middletown (See Figure 18)
Length: 6 miles
Type of Trail: Multi-Use
Jurisdiction: Town of Middletown, County

In its last comprehensive plan update Middletown identified a greenway encircling the Town which would act as a growth boundary for the Town. A trail is proposed to be located within the greenway. Most of the greenway would use several stream valley corridors including a portion of Catoctin Creek.

This trail would be for primarily recreation use though it would also provide access to the school complex from the residential areas in the Town. It would have common segments with the Middletown - Myersville Trolley Trail and the Catoctin Creek Trail. Every effort should be made

to develop the greenway with a multi-use trail to accommodate the greatest number of users and to be consistent with the Trolley Trail.

Issues

- Environmental impacts from locating a trail within the floodplain.
- Crossings of US 40A and MD 17.

Catoctin Creek Trail

Location: Potomac River to Myersville (See Figure 18)
Length: 19 miles to Myersville
3.5 miles - extension to Catoctin Trail
3 miles - extension to Appalachian Trail
Type of Trail: Natural Surface
Jurisdiction: County

This trail would follow along Catoctin Creek from the Potomac River to Myersville where it would then follow Middle Creek and ultimately to the Catoctin Trail. Also proposed is a branch, generally along the US 40A corridor, from this trail to the Appalachian Trail. With the exception of the areas around Middletown and Myersville all of the land along these corridors is in agricultural use.

As a natural surface trail, the Catoctin Creek Trail, would be used for recreational purposes for hikers/walkers and equestrians. This trail would provide access to the C&O Canal, to the County's Catoctin Creek Park and to the Middletown and Myersville parks. Also provided are connections between the Appalachian Trail and the Catoctin Trail.

Issues

- Environmental impacts from locating a trail within the floodplain.
- Topography of the stream banks.
- Crossing I-70 at Myersville
- Identification of an appropriate corridor from Middle Creek to the Catoctin Trail.

Catoctin Trail Extensions

Location: At the north and south ends of the Catoctin Trail (See Figure 11)
Length: 2.5 miles - south extension to H&F Trolley Trail
3 miles - north extension to Appalachian Trail
Type of Trail: Natural Surface
Jurisdiction: County, Maryland DNR, Washington County, National Park Service

The Catoctin Trail currently extends from Gambrill State Park north approximately 35 miles to the northwest corner of Catoctin Mountain Park. The trail also traverses the Frederick City watershed and Cunningham Falls State Park. Its entire length is within publicly owned property.

At the northern end a connection would be made to the Appalachian Trail in Washington County. The extension would run through agricultural property and woodlands. The connection at the south end would link the Catoctin Trail with the H&F Trolley Trail. This connection may follow an existing trail and would generally follow Hamburg Rd. and Yellow Springs Pike. This connection would provide off-street pedestrian access from Frederick City to the mountains.

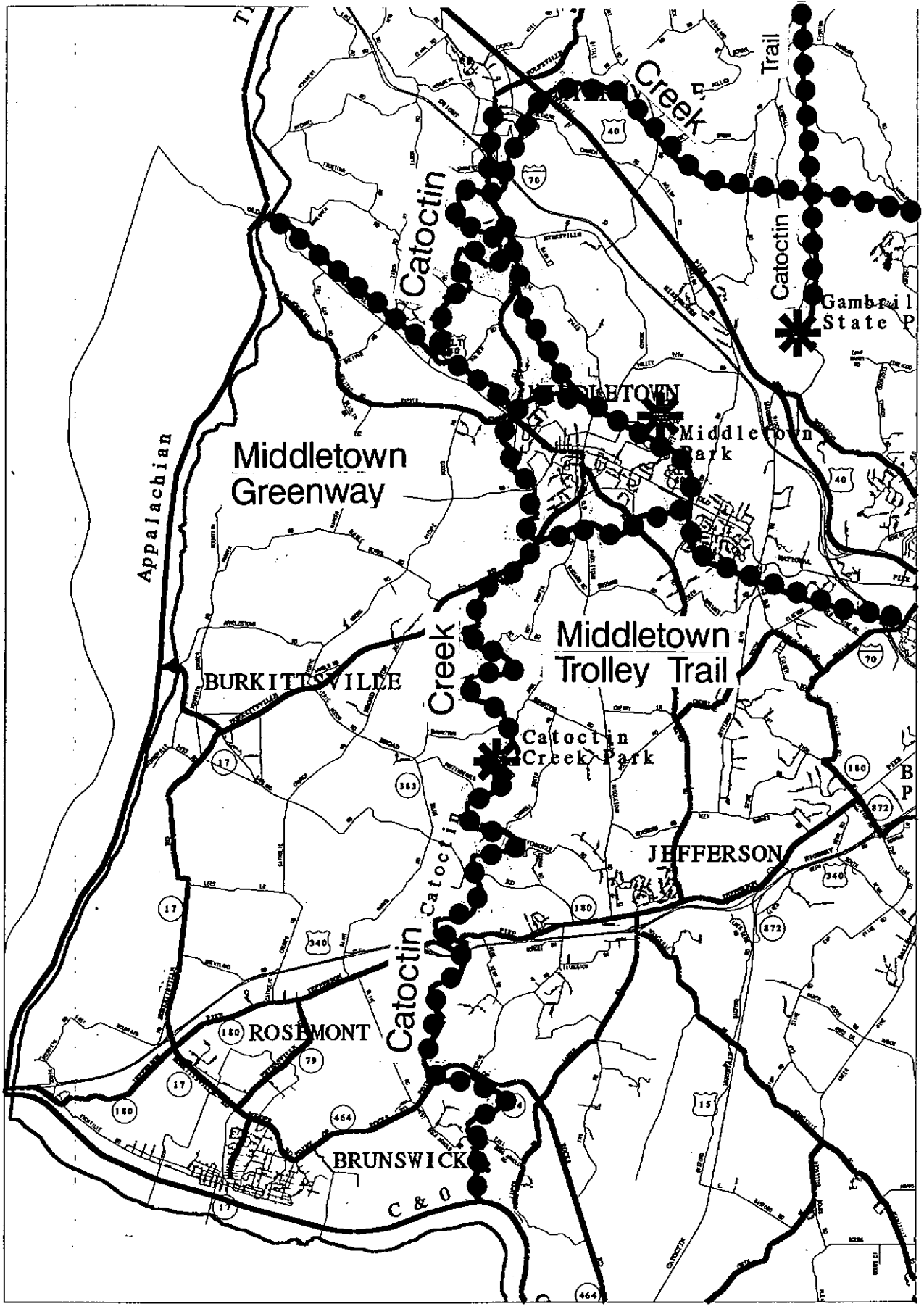

Middletown Greenway
Middletown Trolley Trail
Appalachian
Catoctin
Creek
Trail
Gambrill State P
Middletown Park
BURKITTSVILLE
Catoctin Creek Park
JEFFERSON
ROSEMONT
BRUNSWICK
C & O
Off-Street Trail
On-Street Bikeway

Figure 18

Issues

- Identifying an appropriate corridor at the northern end into Washington County.

Emmitsburg Railroad Trail

Location: Rocky Ridge to Emmitsburg (See Figure 19)
Length: 6.5 miles
Type of Trail: Multi-Use
Jurisdiction: County, Town of Emmitsburg

This would be a rail-to-trail conversion of the long abandoned alignment of the Emmitsburg Railroad which operated from 1868 to 1940. This line provided a connection between the Western Maryland Railroad in Rocky Ridge and Emmitsburg using steam locomotives. This corridor is relatively flat with some rolling terrain. Most of the corridor is located in an agricultural area with some residential uses in Rocky Ridge. At the north end the corridor runs through the grounds of the FEMA property and the Daughters of Charity property.

This trail would provide for both recreation and transportation opportunities. Access would be provided to the Emmitsburg Community Park and to the Loy's Station covered bridge just west of Rocky Ridge. The proximity to FEMA and Mt. St. Mary's would encourage use of the trail for commuting trips.

Issues

- Determine whether the right-of-way is intact to allow for a trail.
- Crossing US 15.
- Crossing federal property on the FEMA site.
- Impacts on agricultural operations along the corridor.

Emmitsburg Greenway and Trail

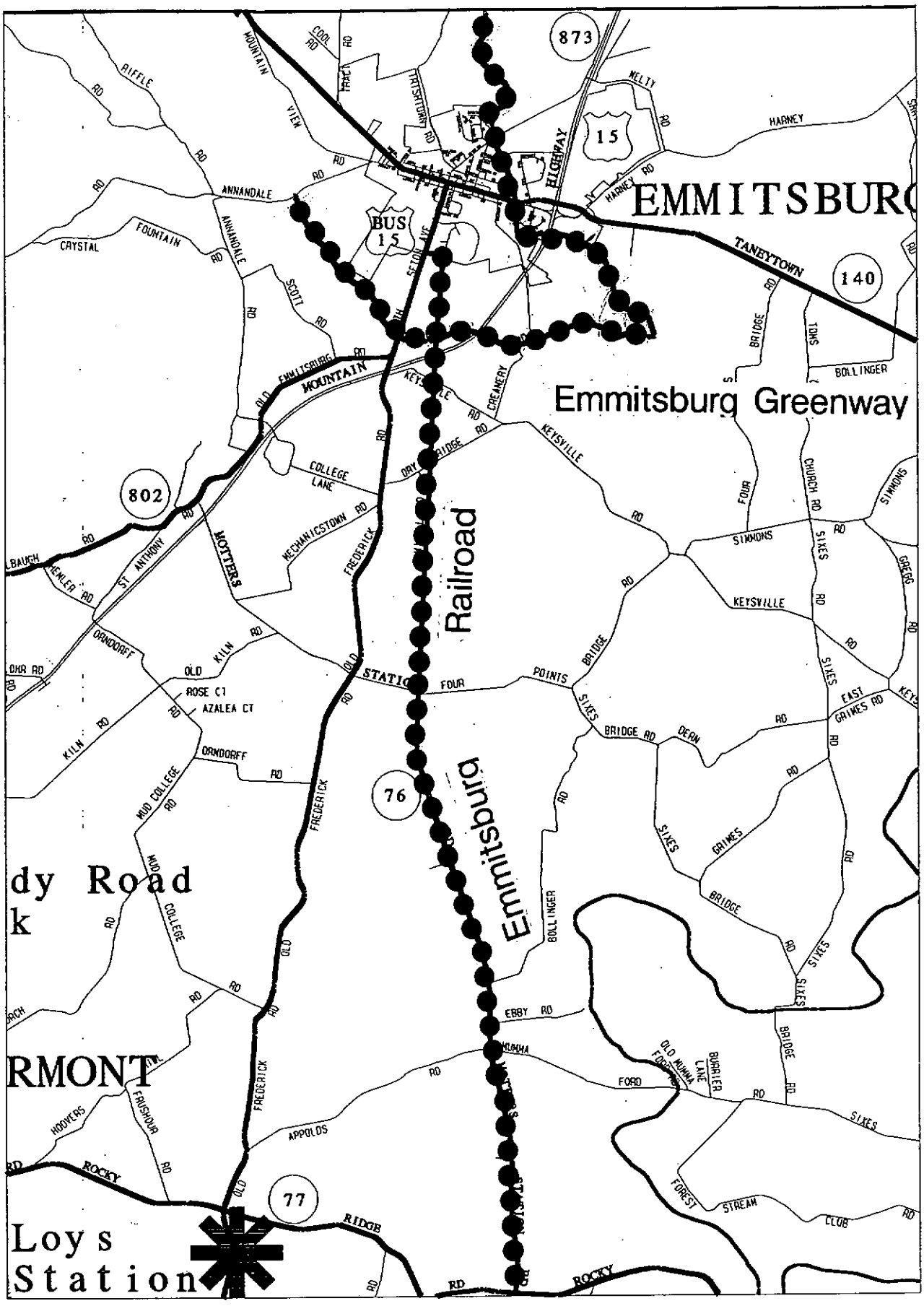
Location: Emmitsburg (See Figure 19)
Length: 5 miles
Type of Trail: Multi-Use and Natural surface
Jurisdiction: Town of Emmitsburg

The 1998 Emmitsburg Comprehensive Plan identifies a greenway and trail which partially encircles the Town. The greenway follows Toms Creek between Annandale Rd. and Flat Run and extends to the north along Flat Run to the Pennsylvania line. The Comprehensive Plan identifies additional trail connections along several small streams which traverse the Town.

This trail system would provide links with the on-street bikeways identified in this Plan as well as bikeways identified in the Town's Comprehensive Plan along some of the local streets. Connections would be provided to the Town's Community Park, Emmitsburg Elementary, the Mother Seton School and Mount St. Mary's College. These trails would primarily serve recreational uses in addition to serving transportation needs for those attending or working at the area schools, FEMA, and the Fire Academy.

Issues

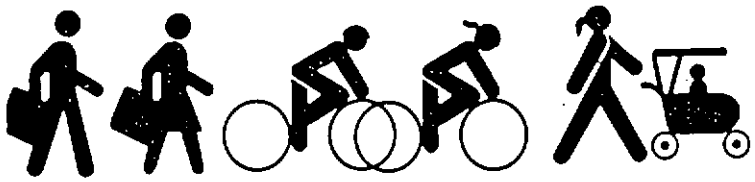
- Environmental impacts from locating a trail within the floodplain.



Off-Street Trail On-Street Bikeway Figure 19

- Crossing US Rt. 15 in two locations
- Crossing several main streets.

Implementation



FUNDING SOURCES

Since federal transportation legislation was passed in 1991 which created the Intermodal Surface Transportation Efficiency Act, otherwise know as ISTEA, the amount of funding available for trails has increased significantly. The reauthorization of the transportation legislation in 1998 has maintained the same program structure that provides funding for trail projects. The new legislation is called the Transportation Equity Act for the 21st Century or TEA 21. There are several programs under TEA 21 that provide federal funding for trail and bikeway projects.

Transportation Enhancement Program

This program is administered by the Maryland State Highway Administration (SHA). The Enhancement Program provides funding for non-traditional transportation projects related to historic preservation, landscaping and beautification, and pedestrian and bicycle facilities. The specific categories related to bikeways and trails are described below.

Provision of facilities for pedestrians and bicycles - Facilities for pedestrians and bicyclists that improve the statewide transportation system. Preferred projects provide off-road access to rail stations, bus stops, ferry landings, other trails, or connect schools or businesses to residential areas. Bicycle and pedestrian facilities should provide transportation connections. Loop paths within local parks are not eligible.

Provision of safety and educational activities for pedestrians and bicyclists - Funding assistance for bicycle and pedestrian safety, educational events, and programs done in conjunction with Maryland's Bicycle Program.

Preservation of abandoned railway corridors - Construction of off-road trails on abandoned railroad and canal facilities. Preference will be given to projects totally on publicly owned, off-road right-of-way that provide off-road access to rail stations, bus stops, ferry landings, other trails, or connect schools or businesses to residential areas.

The Enhancement Program, in Maryland, requires a 50% match by the local jurisdiction which can be cash or in-kind contributions. The use of volunteer labor can also be counted towards the match. A local government agency must be the primary sponsor of a project, though private, non-profit organizations can be partners with the local jurisdiction.

Recreational Trails Program

This program is also administered by the SHA and unlike the Enhancement Program is oriented specifically to off-street trail projects. The following projects are eligible for funding under this program.

- Maintenance and restoration of existing trails.
- Development and rehabilitation of trail side and trailhead facilities and trail linkages.
- Purchase and lease of trail construction equipment.
- Construction of new recreational trails.
- Acquisition of easements or property for trails and trail corridors.
- Operation of educational programs to promote safety and environmental protection as those objectives relate to the use of recreational trails.

This program also requires a 50% match from the project sponsor which can be cash or in-kind contributions.

Federal Highway Programs

The TEA-21 legislation provides considerable flexibility in using highway funding for bicycle and pedestrian projects. It is stipulated that the bicycle projects must be "principally for transportation, rather than recreation purposes". Use of highway funding for bicycle facilities would likely be done only in conjunction with a highway improvement project. The Congestion Mitigation and Air Quality Improvement Program (CMAQ) can be used for construction or nonconstruction bicycle projects. Other programs that can be used include the National Scenic Byways Program for use along scenic byways and Job Access and Reverse Commute Grants which are designed to transport welfare recipients and low income individuals to work.

Federal Transit Programs

A Transit Enhancement Activity Program provides funding for pedestrian and bicycle access improvements to transit facilities. This program could be used to address access to the existing MARC stations in Brunswick and Point of Rocks and for the proposed MARC stations in Frederick. This funding could also be used to transport bicycles on transit vehicles such as installing bicycle racks on local transit buses.

State Funding

The primary source of state funding for trail projects comes from Program Open Space which has been in existence for over 30 years. This program provides grants, to each county, which can be used for property acquisition and for park facility construction. Frederick County in turn allocates 50% of this funding to be divided among the individual municipalities for local park projects. Program Open Space does not require any local match to use the funds for land acquisition though the program does require a 25% match for the development of facilities.

The Maryland Greenways Commission, which is under the Department of Natural Resources, can provide grants and technical assistance to local jurisdictions for trail projects.

County Funding

At this time the source of local funding would come from the County's general revenues that are allocated to the Capital Improvements Program (CIP). The CIP would include funding for on-street bicycle facilities as part of road projects or perhaps as a separate funding category. Off-street trail projects would be addressed within the Parks and Recreation portion of the CIP. A Potential source of new funding could come from new residential developments. Currently the County requires that new residential developments dedicate a certain amount of public park land within the development. This requirement could be amended to allow developers to pay a fee-in-lieu of land dedication. These fees could then be used for the construction of facilities at existing parks or for trail projects which would serve those developments.

Other Sources

The linear nature of trails can lend themselves to the location of utility lines such as telephone, cable, or fiber optics. Allowing these utilities to use a portion of the trail right-of-way can provide a regular source of revenue for local jurisdiction that owns the right-of-way. The W&OD Trail in Northern Virginia receives revenue from companies that have utilities that either run along the trail right-of-way or cross it.

There are also numerous private, non-profit foundations that provide grants for open space and trail related projects.

Volunteerism

A significant part of most every trail project in the country is the role of private, non-profit organizations composed of local residents. These organizations have helped to solicit public support for trail projects and have also helped to raise private donations for trail construction. Volunteers under these organizations have also contributed their labor to perform various aspects of trail construction and on a long term basis have performed maintenance duties once the trail is open for use.

The role of local private, non-profit organizations and volunteers can help to reduce the burden on the local governments by providing administrative support in organizing trail projects, soliciting private donations to minimize the amount of public funding needed to match any grants, and to provide volunteer labor to help maintain and police trail facilities.

IMPLEMENTATION STRATEGIES

The strategies described below are organized under the following categories:

- Planning
- Facilities
- Education and Promotion

The strategies are not organized in order of priority. Some describe tasks that can be accomplished in the short term while others will obviously take place over a longer time frame.

PLANNING

Conduct detailed off-street trail corridor studies

As a follow up to this Plan more detailed corridor studies should be undertaken to address issues identified in this Plan, identify specific alignments, and prepare the necessary design and engineering plans for a trail. These studies would also address the operational issues such as whether equestrian uses would be allowed. The following corridors are recommended as priorities for the initial detailed corridor studies.

- H&F Trolley Trail
- Ballenger Creek Trail
- Rock Creek - Carroll Creek Trails
- Monocacy River Greenway - section between Tuscarora Creek and Carroll Creek

Integration with regional and municipal plans

The network of on-street bikeways and off-street trail corridors should be identified as part of each of the County's regional comprehensive plans. The regional plans can be used to recommend any revisions to the bikeway and trail network recommended in this Plan. In order to maintain continuity in the network the County should work with the municipalities to include the bikeway and trail alignments on their municipal master plans.

Update of Countywide Bikeways and Trails Plan

While the regional plans will be used to further refine this Plan there should still be regular updates of the Plan to ensure that the proposed bikeway and trail network is meeting the goals established in this Plan. Regular updates will help to refocus on the entire County and the region to be sure that the proposed network is maintaining continuity. It is recommended that this update be undertaken every 5-6 years which is the approximate time it takes to update the eight regional plans.

FACILITIES

Identify on-street bikeway for designation as a bike route

In an effort to maintain the momentum from the adoption of the Plan it is recommended to identify one or more bike routes where there is sufficient space for bicycles where appropriate signage could be installed in a relatively short time period. There would need to be an assessment to determine which road or roads have an adequate shoulder width to allow designation without needing to be widened. The following roads have been identified as immediate priorities for designation as bike routes. These roads may have existing shoulders or pavement width to meet the proposed standards or are under consideration for improvements where bikeway facilities could be incorporated into the initial design process.

It is expected that improvements to a road related to its designation as a bikeway would be considered as part of road improvements proposed in the County's existing Widening and Overlay Program or the Roads Program, which involves construction of new roads or undertakes major reconstruction of existing roads, of the CIP. The application of a specific

bikeway design standard would be considered during the design of the road improvements.

- New Design Rd.
- Boyers Mill Rd.
- Rosemont Ave. - Yellow Springs Pike
- Monocacy Blvd. - Christophers Crossing - Trading Ln.

Develop bikeway maintenance program

This task would involve identifying easy to implement improvements in an effort to eliminate hazards for cyclists and make all roads more compatible for cycling. A form could be developed that would allow citizens to note specific hazards on roads that should be addressed to make cycling safer. These forms would be sent to the Department of Public Works. The most common hazard to be addressed is the replacement of storm drain grates. The re-striping of roads to create shoulders and a bicycling area would be another low cost improvement.

For off-street trails volunteer organizations can play an important role in performing clean-up activities and light maintenance work. An adopt-a-trail program could be set up to allow organizations to maintain certain sections or a trail. Citizen volunteers can also be used to monitor the trails on weekends, providing general assistance to trail users.

Adopt design standards

The design standards described in this Plan should be adopted as part of the County's Design Manual. These standards should also be used and adopted by the municipalities to ensure consistency for bikeways and trails that may cross between the County and any of the municipalities.

Require bicycle parking

Amendments to local zoning ordinances should be made to require developments to provide bicycle racks in addition to the usual off-street parking. Racks should be provided at a ratio of one rack (accommodate 2 bikes) per 50 parking spaces. For employment developments requirements for bicycle lockers should be explored.

Improve safety and policing capability

As off-street trails are constructed there will be a need for more policing capabilities on the part of the Parks and Recreation Department. Coordination concerning this will be necessary with the Sheriff's Office. In particular is the need for adequate communication with the County's radio system to ensure coverage throughout the County.

EDUCATION AND PROMOTION

Conduct a public education campaign

The increasing number of cyclists in the County has brought about numerous conflicts with motorists, some of which have resulted in injuries and fatalities of cyclists. The need to educate both motorists and cyclists about the safe handling and operation of their respective vehicles is

vital to promoting cycling for recreation and transportation. Special efforts targeting children need to be made.

Partnerships between the County and groups including the local police departments, the Board of Education, civic associations, health care organizations, and the business community should be explored. This could be a primary role for the bicycle advisory group. At a minimum the following elements should be included in an education campaign.

- Include bicycle safety programs as part of all elementary school curriculum.
- Promote the use of helmets by all cyclists and increase awareness among parents and children about laws requiring children under age 16 to wear a helmet.
- Enforce traffic regulations by bicyclists
- Promote the rights of bicyclists with motorists
- Education of motorists about the rights of cyclists
- Publicize hunting season schedules where there may be conflicts with trail usage

Establish a bicycle/trail advisory group

Several counties in Maryland have had or are in the process of establishing bicycle advisory groups. These groups are composed of volunteer citizens who have an interest in the promotion of cycling within their community. Typically, a local government staff person is responsible for organizing the meetings, setting up the agendas, and maintaining the membership mailing list. The role of an advisory group would include the following:

- Support and organize educational and safety programs and events related to cycling.
- Provide comments on establishing priorities for bicycle and trail projects within the County.
- Provide comments on design issues regarding specific trail and bikeway projects.
- Provide support for programs and events to promote cycling within the community.
- Be an advocacy group for budget issues related to bicycle and trail projects at the local and state levels.
- Provide representation to the Maryland Bicycle Advisory Committee

There are several options for establishing a local advisory group.

Option 1 - Frederick County Trails Inc. (FCTI)
Frederick County Trails was formed in 1991 in an effort to create a multi-use recreational path and greenway system in Frederick County. The advantage of using FCTI is that they have a core group already organized. The primary issue is whether they would want to broaden their mission to include general bicycling issues.

Option 2 - Bicycle and Trails Recreation Council
The County Parks and Recreation Department oversees several recreation councils which are organized primarily around geographic areas of the County and also for specific interests such as a nature council and for senior citizens. The councils have a formal structure with officers and by-laws which govern their organization. The general membership of the councils are open to anyone. They are in the process of making the individual councils as private non-profit organizations.

Option 3 - Frederick County Bicycle Advisory Group

This option would involve establishing a new group following the organization that has been used by other counties. The County Planning Department would provide the primary oversight of the group. The Citizens Advisory Committee (CAC) that has been working with the staff in developing the Bikeways and Trails Plan could be used to form the foundation for a permanent advisory group. There would not be officers or any formal structure of the group. The membership would participate on a volunteer basis. The mailing list generated by participation with the Plan and from the Frederick County Trails could be used to solicit additional membership in the group.

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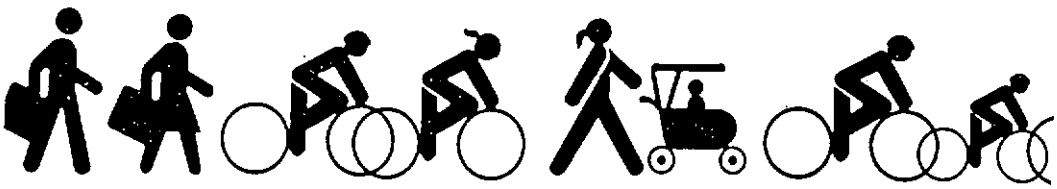
Appendix



Frederick County Bikeway and Trail Plan Survey

1. What are the ages of everyone in your household who bicycle, hike, or horseback ride?

Adults - 141		Children - 47	
18 - 29*	49	0 - 5	6
30 - 39	32	6 - 11*	24
40 - 49	34	12 - 17	17
50 - 59	24		
60+	2		

*Where no age was given, 10 was substituted for children and 18 was substituted for adults. There were 13 10-year old responses and 25 18-year old responses.

2. Which of the following activities do you or members of your household participate in and how often you do them? Please note the number of times per week, month, or year.

70	Bicycling	1 - 7 week (46)	1 - 4 month (18)	2 - 6 year (5)
55	Hiking/Walking	1 - 7 week (40)	1 - 4 month (11)	5 - 10 year (3)
9	Horseback riding	1 week (2)	2 - 5 month (2)	1 - 5 year (5)

3. Where do you currently ride your bicycle, hike, or horseback ride? Check all that apply.
63 Local neighborhood streets
34 Major streets and State highways within Frederick County
52 C&O Canal
12 Northern Central Trail (Baltimore County)
26 WO & D Trail (Northern Virginia)
40 State Parks
22 Other see attached

4. Why do you ride a bicycle?
66 Recreation
13 Commuting to work
60 Fitness
2 School
7 Shopping

5. What is the average distance or time for your bicycle, hiking, or horseback riding trips?

Bicycling (67)	3 - 60 miles (55)	1 - 3 hours (12)
Hiking (43)	2 - 15 miles (34)	1 - 3 hours (9)
Horseback riding (6)	6 - 15 miles (3)	1 - 6 hours (3)

6. What kind of obstacles are there to cycling, hiking/walking, or horseback riding in Frederick County?
41 Poor road surfaces, storm drain grates etc.
58 Lack of shoulders
27 Access to existing trails
47 Availability of trails
21 Trail head parking facilities
21 Other see attached

7. What would encourage you to bicycle, hike etc. more often?
56 Designated on-street bicycle facilities (bike lanes, shoulders)
48 Off-street trails
39 Signed bike routes
23 Better road surfaces
23 Education for children/motorists/adult bicyclists
19 Bicycle parking
18 Other see attached

8. What priority would you give for using public funding to develop and maintain trails and bikeways?
2 Low
18 Moderate
53 High

Question 3 - Where do you currently ride your bicycle, hike or horseback ride?

50 miler rides in Thurmont area
Appalachian Trail (2)
B & A Trail
Bike path being installed on trolley line in Thurmont
Capital Crescent Trail
Country (horseback riding)
County roads (3)
Fort Detrick
Frederick Municipal Forest (2)
Sugarloaf (2)
Travel (3)
Watershed (3)
Western MD Rail Trail

Question 6 - What kind of obstacles are there to cycling, hiking/walking or horseback riding in Frederick County?

At-grade crossings are unsafe
Lack of bike racks and bike parking
Lack of courtesy from some motorists (7)
Map of trails in Frederick County
Poor driver education in relation to cars
Poor traffic and speed enforcement by Police Department and Sheriff's Office (2)
Public mentality
Stinking school buses
Storm grates in roads
Too many cars, trucks, buses
Traffic (2)
Traffic Hazards
Trash

Question 7 - What would encourage you to bicycle, hike, etc. more often?

Bike carriers on Transit buses
Bike routes to grocery stores (near 7th Street)
Cross county routes
Easier to access trails
More free time (2)
More mountain bike trails
More stream valley parks (greenways)
More trails
Paved trails
Proximity/easy place to take children that is safe
Racing Tracks MTB
Safer routes
Safer street and railroad crossings
Shallower grades
Shower facilities in County buildings
Trails that are accessible to communities
Transit in eastern half of County

INTRODUCTION

Public agencies are frequently confronted with increasing demand for services, while suffering with static, if not decreasing financial resources. Moreover, this comes during a period when the public is demanding agencies be more accountable and measured in their allocation of limited public monies.

As a result, over the past 15-20 years, public agencies have adopted more of a customer-centered approach to the production and delivery of goods and services, adopting practices and strategies which are frequently described as "non-profit marketing." Among them is the practice of actively soliciting input from the jurisdiction's populace regarding their wants and needs pertaining to the delivery of programs and services.

The "needs assessment" gathers information directly from the public, analyzes it, and guides the agency in the efficient, effective, and equitable delivery of services. This process allows the agency to "take the pulse of the entire community, being responsive and accountable to more than just the vocal and visible interest groups of the agency" (Crompton, 1994).

Frederick County, Maryland

Frederick County, Maryland finds itself in the center of an explosion of population, development and pressures to satisfy increasing demands for services. The County's Bureau of Parks and Recreation epitomizes this problem. Limited staff and budget resources conflict with the need to develop existing county land resources into more accessible parks and open space; and, to offer a more comprehensive array of recreation programs and other activities designed to enhance the quality of life for all citizens.

This report summarizes a study of the needs of Frederick County's citizens pertaining to parks, recreation facilities and associated programs. This study should better inform the actions of the Frederick County Parks and Recreation Commission in decisions related to comprehensive planning and allocation of budget resources.

Objectives:

This study was designed to accomplish the following objectives:

1. Assess the current use of park and recreation facilities and programs by residents of Frederick County, including use of facilities and programs outside the County.

2. Determine the perceptions of residents regarding the adequacy of facilities and programs now, as well as those required to meet the demand in the future.

3. Determine the preferences of County residents regarding spending priorities on parks and recreation needs (e.g., large parks vs. smaller neighborhood parks, land protected as public open space vs. developed as athletic complexes).

4. Assess citizens' preferences for specific methods of funding parks and recreation facilities and programs (i.e., bonds, user fees, general tax support, etc.).

METHODS

A mail survey of 1,500 randomly-selected Frederick County Residents (including the City of Frederick and 11 other municipalities) was conducted, requesting information regarding the objectives above. A survey sample of this size was more than adequate to produce statistical inferences to the total population, accurate within +/- 3 percent at a 95% confidence interval.

A questionnaire was developed in consultation with the Parks and Recreation Commission, and the Needs Assessment Subcommittee, which was comprised of knowledgeable citizens having an interest in the future of parks and recreation in the County. This 12-page questionnaire solicited information regarding: (a) current use of recreation facilities, (b) perceived adequacy of facilities, (c) evaluation of, and management issues associated with 8 specific parks, (d) perceived adequacy of recreation programs, and (e) preferences for parks and recreation funding strategies.

Staff of the Bureau of Parks and Recreation prepared the mailings, including a postcard reminder and two follow up mailings, to 1,500 citizens selected randomly to participate in the study. Completed surveys were returned to the Bureau over a 10-week period. Data from the returned questionnaires were entered into a computer file for analysis.

Response Rate

During the data collection period, a total of 72 surveys were returned as undeliverable. Further, another 165 people responded stating they chose not to participate. These surveys were eliminated from the original sample, thus reducing the effective sample size to 1,263. A total of 644 usable surveys were returned; this produced an effective response rate of 50.1 percent.

Table 1. Usage of recreation facilities by Frederick County residents in the past year (Pct. of all respondents)

Rank	Facility	Pct.
1	Group Picnic Shelters	50.8%
2	Walking/Jogging/Bicycling Paths	47.4%
3	Swimming Pools	42.5%
4	Historic/Cultural Sites	41.8%
5	Playgrounds/Tot Lots	35.4%
6	Nature Centers	31.9%
7	Fishing Areas	28.4%
8	Basketball Courts	24.4%
9	Golf Courses	24.4%
10	Ice Skating Rinks	23.4%
11	Tennis Courts	20.8%
12	Community Centers	16.8%
13	Soccer Fields	16.3%
14	Boat Ramps	15.1%
15	Softball Fields	14.1%
16	Little League Baseball Fields	13.3%
17	Volleyball Courts	8.7%
18	Football Fields	8.1%
19	Rollerblade Facility	8.1%
20	Babe Ruth League Baseball Fields	4.7%

Summary: The demand for parks and recreation facilities is a function of both proportion of the population using the facility (i.e., Table 1), and the intensity of that usage. Utilizing both statistics, three types of recreation facilities were found to receive the most use in Frederick County.

- Walking/Jogging/Bicycle Paths
- Swimming Pools
- Playgrounds and/or Tot Lots

21. In a separate question, respondents were asked to rank the top three facilities in terms of importance to their families and them. The results further support the finding that Paths, Swimming Pools, and Playgrounds and Tot Lots are the facilities most in demand. Over 40 percent of the respondents ranked Walking/Jogging/Bicycle Paths as either the Most Important, Second Most Important, or Third Most Important facility to them. Similarly, Swimming Pools (36.8%) and Playgrounds and Tot Lots (36.2%) were ranked as Important to respondents.

Table 3. Ranking of Frederick County recreational facilities based on percentage of respondents who reported facility was INADEQUATE OR IMPORTANT BUT UNAVAILABLE (Pct. of all respondents)

Rank	Facility	Pct.
1	Walking/Jogging/Bicycle Paths	26.4%
2	Swimming Pools	16.5%
3	Nature Centers	15.3%
4	Fishing Areas	14.3%
5	Community Center	11.5%
6	Basketball Courts	11.4%
7	Rollerblade Facility	11.1%
8	Boat Ramps	9.6%
9	Golf Courses	9.0%
10	Group Picnic Shelters	8.9%
11	Historic/Cultural Sites	8.6%
12	Ice Skating Rinks	8.3%
13	Soccer Fields	7.8%
14	Volleyball Courts	7.8%
15	Playgrounds/Tot Lots	6.9%
16	Softball Fields	6.9%
17	Tennis Courts	6.5%
18	Babe Ruth League Baseball Fields	4.8%
19	Little League Baseball Fields	4.6%
20	Football Fields	3.6%

Summary: Perhaps the best way to view the data above is to eliminate the "not interested-no opinion" group from consideration (at least temporarily) and determine which facilities come closest to satisfying the existing demand. Conversely, in planning for future development needs, the agency should concentrate on those facilities having the highest levels of unmet demand.

Walking/Jogging/Bicycle Paths are the facilities with the largest unmet demand. Over 26 percent of the respondents indicated that Paths were either inadequate, or not available. This is almost 10 percent more than the facility with the next largest unmet demand. Swimming Pools (16.5%), Nature Centers (15.3%) and Fishing Areas (14.3%) also had large proportions of unmet demand.